

Medical Library

CLINICAL MEDICINE and SURGERY

April, 1928

Vol. 35, No. 4

LEADING ARTICLES

The Physician's Responsibility in a National Emergency

By Geo. A. Skinner, M.D., Omaha, Nebr.

Tuberculosis in Children

By Clarence L. Wheaton, M.D., Chicago

Neurotic Ulceration

By J. Henry Dowd, M.D., Buffalo, N. Y.

Chronic Prostatitis and Its Treatment

By Curran Pope, M.D., Louisville, Ky.

The Surgical Aspect of Goiter

By Gustavus M. Blech, M.D., Chicago

Fibroplastic Sarcoma in a Goldfish

(A Case Report)

By A. G. Dominguez, M.D., Havana, Cuba

The Treatment of Eczema

By Frank Edward Simpson, M.D. and Roy Emmert Flesher, M.D., Chicago

Foods in Relation to Normal Function of the Colon

By G. M. Russell, M.D., Billings, Mont.

Audible Speech Development After Complete Laryngectomy

(A Preliminary Report)

By Jennie Hedrick, Washington, D. C.

Editorials

Dr. Joseph B. De Lee

May Day

Enthusiasm and Panaceas

Industrial Medicine

Nuclein

Medical Education and Country Doctors

Lying as a Fine Art

The Body's Defenses

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JOSEPH BOLIVAR DE LEE, M.D., A.M., F.A.C.S.



Clinical Medicine and Surgery

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Dr. Joseph B. De Lee

IN every field of Medicine there are men who stand out prominently because of certain qualities of energy and personal accomplishment. They may be no better equipped, professionally, than are others whose names are not widely known (though they generally are), but they possess that something which we will call leadership.

In the specialty of obstetrics and gynecology, De Lee is one of these leaders. He was born October 28, 1869, at Cold Springs, New York, and after going through the common schools he attended the College of the City of New York. Later he went to Chicago, where he finished his high school course in 1888.

In those days a college degree was not required for entrance to the best medical schools, so Joseph entered the Chicago Medical College (now the Medical School of Northwestern University) and emerged, four years later, with his degree as a Doctor of Medicine.

Realizing the importance of hospital training, he secured an appointment as interne in Cook County Hospital, though such work was not then required, and served for a year.

Emerging from his internship, he was still not content to enter upon the practice of his profession at once, but, in order to

consolidate his fund of basic knowledge, he accepted a position as demonstrator of anatomy in his Alma Mater, and also lectured on physiology at the Dental School.

Thirty-five years ago, a period of training in the great universities and clinics of Europe was considered essential, for a man who aspired to eminence in the medical profession, so Dr. De Lee spent the years 1893 and 94 in the Universities of Vienna, Berlin and Paris, laying further foundations for his later activities.

Upon returning home, he was made demonstrator of obstetrics at Northwestern University Medical School; the next year he was advanced to the position of lecturer in the same subject; and in 1896 he accepted the chair of obstetrics, though the title, Professor, was not conferred upon him until the following year.

Hospital facilities were by no means always considered essential in obstetric practice at that period and were not very extensively provided, so De Lee, foreseeing the developments of the future, founded, in 1895, the Chicago Lying-In Hospital, (now widely used as a pattern for the obstetric departments of hospitals all over the country), of which he is, today, the medical director, chief obstetrician and president of the medical staff. In addition to this he is

attending obstetrician at several other Chicago hospitals.

In token of his conspicuous accomplishments, the University made him an honorary Master of Arts, in 1906.

In addition to his membership in the basic medical societies, Dr. De Lee is a Fellow of the American College of Surgeons and of the American Gynecological Association, and a member of the Gynecological Society (of which he was president in 1908), the Mississippi Valley Medical Association and the Chicago Historical Society.

The Doctor's labors and achievements have not been solely in the practice of his specialty. He has contributed to medical literature a number of textbooks which are popular and widely used, including "Notes on Obstetrics," as well as a large number of articles in current periodicals.

In person, Dr. De Lee gives the immediate impression of alertness, tremendous energy and a keen and lively interest in the affairs of his community, his profession and of the country in general. One realizes, even without knowing who he is, that here is a person of importance.

Life grows more with the planning of the new than in the achievement of the already planned.—
C. Jinara-Jadana.

MAY DAY

A generation or two ago the first day of May was celebrated as a joyous festival, symbolizing the return of springtime and life. Pageants were devised; the traditional May-pole dance was staged; and young men and boys placed baskets of spring flowers upon the doorsteps of their dulcianas and fled, in order to maintain the impression of a desire that their attention should remain anonymous.

This pleasing custom, along with many other little amenities of life, has been stifled by the pressure of modern activity in material matters. For some time, the only significance attached to May Day seems to have been as an occasion for socialistic labor demonstrations, especially in Europe.

But now efforts are being made to revive the traditions of the day, with a new and valuable significance. Five years ago, the American Child Health Association selected May first as *Child Health Day*, and has been putting forth efforts to secure its general recognition in this connection.

It is well that this should be so. In the

struggle for economic supremacy our people and their representatives in the various legislative assemblies seem to have forgotten that children can be consumed, the same as trees or oil or any other commodity. It is a standing disgrace to our nation that we have laws for the protection of forests, cattle, swine, poultry and other tangible assets, with ample appropriations for carrying out their provisions, while little or nothing has been done for the conservation and development of our most valuable crop—our children!

It is not that we yearn for more governmental interference in the personal activities of our citizens, but that the attitude of Congress and the various State Legislatures reflects a disastrous lack of interest in the problems of childhood, on the part of the people of the United States.

This is the century of the child. In the last three decades the hazards of the newborn have been cut in half and the average span of life has been increased ten years, largely through reduction of infant and child mortality, by the large measure of control we have gained over diphtheria, scarlatina and other scourges of early youth, as well as by the improvement in general hygiene and sanitation.

But we still have a long road to travel before we reach even an approximately ideal state of affairs. Forty thousand school children still die each year from preventable causes—a terrible waste of life and energy!

And what are we doing about the emotional and mental life of our children? Little or nothing! This is a vital problem. We rail at the "rising generation" for their thoughtlessness, frankness and frequent excesses; but when they have asked us for bread, we have, all-too-frequently, given them a stone. We have not afforded them a working philosophy upon which to build a sound and sane life—largely, no doubt, because we have none ourselves. Someone has said that the chief difficulty with the youngsters is that they *know* so many things that they do not *understand*. Life is giving them knowledge; but it is we who must help them to gain understanding.

So it is well that a day should be set apart for reminding us of our unescapable duties and our exalted privileges in assisting in the constructive development of our youth. Public health agencies, school authorities, physicians and all the mothers and fathers of our land should eagerly unite

in the study and adoption of a program for the fostering of the health—physical, emotional and mental—of those who, in a few years, will be controlling the Nation's destinies.

This is not a job for *someone else* to do. Each of us, individually, should be striving to find what part *he* can play in making the world a safer and sweeter place for children to live in; and until we embark upon this undertaking, with thoughtful earnestness and unequivocal sincerity, we have no right to call ourselves a civilized nation.

Let there be a purpose in all legislation, to recognize the right of man to be well born, well nurtured, well educated, well employed and well paid.—Coolidge.

ENTHUSIASM AND PANACEAS

In the Middle Ages the alchemists spent their lives in searching for the "philosopher's stone," a mythical substance whose touch would transmute the baser metals into gold and perform other magical feats. In the early days of the history of the white races on this Western Continent, a Spaniard who had spent his forces in rather concentrated living—his name was Ponce de Leon—sought diligently for the "fountain of youth" whose waters would, so he hoped, restore to him the vigor and powers of adolescence.

We have a tendency to laugh at these misguided seekers, today, but, as a matter of fact, such risibility shows rather superficial thinking, because we are hunting for the same identical things, only we call them by more erudite and scientific names, such as *therapia sterilizans magna* and the like.

In order that a man may have the force, patience and persistence to impress some new truth upon the world he must be, to a considerable extent, a man of one idea. It is curiously significant that such men have been called by the name of that indispensable contrivance, by means of which movement is transmitted to huge machines from comparatively small and greatly concentrated sources of energy, the crank. Harvey, Jenner, Pasteur, Lister, Marconi and the Wright Brothers were "cranks"—and they moved the world!

To the man of lukewarm interest, discouragement comes easily. He may have hold upon a great idea, but when others

laugh and look pityingly upon him he lets it go. To keep hammering away at a piece of cold iron, until it is fashioned into a tool for tearing human thought loose from the mossgrown rocks of preconceived opinion, requires enormous confidence and enthusiasm.

This very concentrated effort has, however, certain drawbacks which must be taken into account by those who observe and study the work of the enthusiasts, if sound and valid conclusions are to be drawn from this work.

The enthusiast is, as a rule, a seeker after panaceas. The plodder is content to determine and record the number of hairs on the left hind leg of a new variety of insect: The enthusiast will be satisfied only by revolutionizing human thought.

The discoverers of bacteria, antiseptics, arsphenamine, focal infection, insulin and similar epoch-making matters were sure that the last word had been said. But not all human ills are due to pernicious bacterial action—many are the result of man's foolishness; arsphenamine will not sterilize the tissues and fluids of the body; focal infections have certainly not been proved to be the basis of all morbid states; and insulin will not cure diabetes, though it has saved many lives.

Metchnikoff gave the world a great truth when he announced the vitally important part played by the leukocytes in the economy of the animal body; but he demonstrated his fallibility by dying at a comparatively early age, in spite of his Bulgarian sour milk. Ehrlich was no fool, and when he announced his side-chain theory of immunity he made a great contribution to human knowledge; but he showed a lack of perception when he disregarded the work of Metchnikoff and when he announced salvarsan as the long-sought "great sterilizer."

Diseased tonsils, teeth, appendixes, gall-bladders and ovaries have, no doubt, contributed largely to the sum of human misery; but there are other factors to be considered in evaluating the etiology of disease processes. We are only beginning to realize the importance of the emotions and the thoughts—the psyche—as perverters of physiologic processes.

Let us thank God for the enthusiasts—the "cranks"! These are they who keep the wheels of progress turning. But let us not forget to season our thinking with the proverbial "grain of salt."

"A thing need not be proved perfect in order to be proved good," so let us listen to the "cranks" with wide open ears and minds. But there is no substitute for common sense.

In spite of the "tumult and the shouting," panaceas are not yet. Nevertheless, when they *do* appear, if ever, it will be the enthusiasts who bring them to us.

Men worry over the great number of diseases; doctors worry over the small number of remedies.—Chinese Proverb.

INDUSTRIAL MEDICINE

In the course of our evolution we have worked up through the stages of absolute individualism, like that of the lower animals; rudimentary cooperation, in families and tribes; warfare and pillage; the age of agriculture; and now we seem to be in the midst of what can fairly be said to be an industrial era.

With changing periods in human development, the needs of the people have changed, and the types of medical attention, available and required, have altered, along with many other matters.

Modern industry introduces hazards unknown to our grandfathers. We must gain an appreciation of these problems, if we are to keep abreast of professional thought, and our sons must be trained to attack their solution with alert intelligence and understanding of their basic elements, for it seems hardly thinkable that we will revert again to the domestic handicraftsmanship of bygone generations.

We were powerfully impressed, recently, on visiting and inspecting the Tennessee Coal, Iron and Railway Company's hospital at Birmingham, Alabama. Here is an institution, modern in every respect and well staffed, conceived and operated for the purpose of rendering adequate medical service to the employees of this great corporation, and to their wives and children.

Nor is this service confined to the hospital. An organization like the medical service of an army, or the health department of a large city, covers the whole field of the company's operations and takes care of the employees during every type of physical vicissitude.

This is not a piece of pure altruism. The great employers of many men are learning that it is sound and practical *business* to hire only those who are in good health, and

then to *keep* them in a healthy condition. If many workers are frequently incapacitated for several days, every now and then, because of colds, bronchitis, "rheumatism" or infected wounds, the employer loses much money by reason of absenteeism and decreased efficiency. The medical department *pays dividends*—intangible, perhaps, but none the less real.

Industrial medicine does not mean merely the ability to treat fractures and burns and remove foreign bodies from various parts of the body. It requires a profound knowledge of psychology and sociology, as well as of medicine and surgery. It resembles military medicine in many respects and calls for complicated and rapid thinking in regard to rest and recreation, amusements, the control of epidemics, and other similar lines of work, and also the keeping of accurate and complete records, with regard to the health history and status of every employee.

Even a physician who has had excellent training in his profession and has established a considerable reputation as a diagnostician and therapist, would find himself decidedly unprepared for the multifarious duties of the industrial physician or surgeon, and might not fit into the scheme of things at all.

Since this line of work bids fair to increase in importance with every passing year, and since it requires special aptitudes and special training and offers very considerable rewards to the men who make a success in it, it surely will not be amiss if the younger physicians and those just entering upon the practice of medicine give industrial medicine serious consideration as a specialty to which they can profitably devote their lives.

This is no place for the sluggard or the seeker after sinecures. It is a full-size, man's job and offers a better-rounded and more comprehensive experience than that held out by most of the other specialties.

The great corporations are marvellously accurate judges of values, however, and unless one has ability, enthusiasm, energy, industry and loyalty, in large measure, he had better take his wares to another market, where the purchasers are less well informed and discriminating. If one has these things, one can rest assured that they will be appreciated in the industrial field, and remunerated in very exact proportion to their soundness and value.

NUCLEIN

Dr. Victor C. Vaughan, formerly Professor of hygiene and physiologic chemistry at the University of Michigan (now with the National Research Council) is the man who first introduced nuclein into medicine.

This drug is a highly complex protein substance, obtained from animal glands (thyroid, thymus, liver, spleen, etc.) and from vegetable sources, chiefly yeast and certain grains. It is a yellowish, amorphous powder, carrying a high percentage of phosphorus in the form of nucleic acid. It is incompatible with acids, but readily soluble in dilute alkalis. It is sometimes given in powder form, by mouth—as in protonuclein, a combination of nucleins from various sources—but more commonly in the form of a solution of sodium nucleinate, standardized as to its phosphorus content (1 mgm. per cc. is a satisfactory strength).

Nuclein is nontoxic, and the only untoward results are the reactions—local, focal and general—which sometimes follow large doses (1 to 2 cc. or more), especially when these are given as a first dose. The reactions are sometimes distressing but never dangerous.

Effects: The mechanism of the action of nuclein is unknown. It produces, within 3 hours of an intramuscular injection, a sharp and considerable increase in the leukocytes, especially the polymorphonuclears. This leukocytosis is maintained for 24 to 48 hours. It is believed, also, to enhance, in some manner, the antitoxic and bactericidal power of the blood, but the leukocytosis may well account for its complete action, and this effect can be demonstrated by anyone who will make white-cell counts before and after administering nuclein.

Uses: Nuclein is a valuable aid in the treatment of all varieties of acute and chronic infections. In conditions not definitely of infectious origin it may have some value, but this is open to question.

In the acute communicable disease, pneumonia, influenza, measles, smallpox, diphtheria, etc., it assists materially in the prompt amelioration of the symptoms; and it is also decidedly helpful, or even positively curative, in more general conditions like septicemia, peritonitis, phlebitis, appendicitis, empyema and other acute, non-contagious infections.

In chronic infections—sinusitis, tuberculosis, pelvic inflammations in women and the like—the results are not so spectacular, but, if the administration of the drug is continued regularly, for some time, the effects are decidedly satisfactory. The statement has been made that nuclein solution applied to the glans penis, will stimulate erection, but this has not been confirmed at all generally.

It is an all-around re-inforcer of body resistance and should be more generally and freely used, on this basis.

Administration: The most satisfactory way of giving nuclein is by intramuscular injection (preferably into the buttocks); though the solution, placed under the tongue, seems to be absorbed rather readily. The usual oral dose is 10 to 30 minims (0.6 to 2.0 cc.), 3 or 4 times a day.

When given by injection, the first dose should be small (about 0.3 to 0.5 cc.), to test the patient's reaction. The quantity at subsequent doses can then be increased until reaction is obtained—2 to 3 cc.—repeating every 8 to 12 hours. In chronic cases, the smaller doses (up to 10 minims—0.65 cc.) should be given once or twice a day for periods up to 5 or 6 months.

The solution can be purchased in ampules or in rubber-stoppered bottles, so that injections can be made easily and safely.

Every man knows something wherein I may learn of him, and in that I am his pupil.—Emerson.

MEDICAL EDUCATION AND COUNTRY DOCTORS

It begins to look as though the people who are suffering because of a lack of adequate medical service in rural districts were going to bring pressure to bear upon the medical authorities to do something for their relief.

The National Grange is the most powerful farmers' organization in the United States and is the official mouthpiece for hundreds of thousands of those who live on our farms and in our smaller towns. Large bodies move slowly; but when they get in motion they develop astonishing momentum.

At its last annual meeting, in November, 1927, the Grange sent a memorial, calling for help, to the House of Delegates of the American Medical Association. There was nothing hysterical about this document—it was very sane and reasonable—but it had a tone of firmness which sounded like business.

It called attention to the facts that, in 1924, there were 6,000 less physicians in rural districts than there were in 1906; that one-third of the towns of less than 1,000 inhabitants which had physicians in 1914 had none in 1925; that the average age of country doctors is now 52 years, while the average age at death is 62; that scores of counties have no physician who has been graduated in the last 10 years; that the number of physicians in the United States is decreasing, while the population is increasing; and several other significant and ominous conditions.

These serious and hard-working people want just as good medical service as anyone has, and feel that they deserve it. They are under the impression that the reason they are not getting it is because medical education has been taken out of the hands of the 160 medical schools, which formerly existed (many of which were located in small cities and charged low fees), and concentrated in the 69 large colleges which are now functioning, many of which are heavily endowed with public money and most of which are expensive to attend.

It seems to them that medical curriculums have become too heavy with academic and technical instruction and with specialism, so that the time and expense required for gaining a medical education are shutting out many of the young people of small means whose tastes and early training would incline them to settle in the smaller communities.

Most of the exceptionally able and eminent men of the present generation of physicians went into medical school directly from high school, and spent four years in gaining their degrees—eight years from grammar school to practice. The great men who were our professional fathers and teachers spent even less time. Today it means high school, college, medical school and at least one year of internship—thirteen years, out of the most active period of life, from grade school to diploma. Many question whether the extra five years is giving them doctors who are enough better equipped to care for the lives and health of the people to make the extra expenditure of time, money and effort worth while. They wonder if a larger number of men, trained to meet the ordinary, daily emergencies of general practice, would not serve them better than

will a smaller number of half-baked, would-be specialists.

Quietly and without any bluster, they suggest that, if the authorities now in charge of our centers of medical education are unable or unwilling to give them what they need, it may be necessary for the States to build and maintain, *strictly under public control*, medical schools which will supply their requirements.

This matter is worthy of deep and serious consideration by the people who have to do with the policies of our universities and other medical schools, if they desire to keep hold of the tiller of the great ship of Medical Education. These citizens who, a few years ago, were jeeringly called "hicks" and "hayseeds," are among the most solid and thoughtful elements in our population. Their minds may not function with lightning-like celerity, but when they decide what it is that they really want, they are very likely to *have it*—if not today, then tomorrow.

Something is going to be done in medical education before long. The only question is, are *we* going to do it, of our own free will, or are we going to wait until we are forced to do something which may prove not to be so sound and wise as the plans we might have worked out if we had been less self-centered and complacent.

The aim of education is not so much the development of special skill as it is to give a man a clear understanding of his abilities and a just appreciation of his limitations.—Dr. David A. Mitchell.

LYING AS A FINE ART

There is an elderly proverb to the effect that "Honesty is the best Policy." Now, honesty is a fine and necessary thing, but it certainly is no *policy* at all, good or bad. "Policy" implies a course of conduct arrived at after a careful consideration of all the circumstances and the elimination of all factors which are worthless or harmful. Honesty, in the usual acceptance of the word, is certainly nothing like that.

The man who would lie for his own benefit or to the injury of another is unworthy of respectful consideration; but how about the man who lies to save someone else from sorrow, pain or disgrace, and frequently to his own detriment? Dr. Joseph Collins has said, "The longer I practice medicine, the more I am convinced that every physician should cultivate lying as a fine art."

That does not mean that the possession of a diploma from a medical school gives a man license to lie, under conditions where it would be unworthy or shameful for a layman to do so, but merely that his professional status confronts a doctor with certain situations, not met in ordinary relations, where the question of a "policy" is important.

The physician who would falsely state that he fully understood a case which was still dark to him; that he had cured or could cure a condition known to be incurable, by present methods; that a condition was incurable when, as a matter of fact, there were means of curing it, but not within his powers; or other similar matters, does an irreparable injustice to his patients and prostitutes his professional and personal character.

But how about the patient with a truly and definitely incurable malady? Or the one whose condition is serious, but remediable—*provided* he can maintain emotional or mental tranquility? Would anything be gained by signing such a man's death warrant in his presence? Collins says, again, "Doctors should be detectives and counselors; not juries and judges."

Under such circumstances it is generally best to tell the patient's family the true conditions, but this is not always the case. Sometimes the immediate relatives and friends can, by *helping* the doctor to delude the sick man, make his last days pleasant and comfortable, when otherwise they would be unspeakably terrible. But at other times these good people, with the best intentions in the world, can and will undo in a moment all the good which the conscientious physician has painstakingly wrought. This is where the *fine art* comes in—the art of estimating the situation and determining wisely what and how much truth to tell, and to whom.

Then there are the physicians who, in order to impress a patient with their thoroughness and erudition, or for some worthier, if obscure, motive, give him all laboratory reports, radiographs and similar documents, thus permitting him to hamper subsequent consultants by the uninstructed but obstinate judgments at which he arrives by poring over matters which were never intended for his eyes. Such a course of conduct appears to us to embody a mistaken conception of "honesty," even under the most charitable interpretation

which can be put upon it. "A little knowledge is a dangerous thing."

Hope is a tonic whose power and value are too little appreciated by most physicians. Administered judiciously, it has often proved itself an adjuvant in the cure of apparently irremediable conditions; while its untimely withdrawal has frequently determined a fatal issue under circumstances where, with its help, the patient might have gone on to complete recovery. Like all other powerful remedies, its use or withholdment are matters for the decision of ripe professional judgment.

In the ultimate analysis, what is "the truth?" For us, it is nothing more than the way things appear to us, at the moment. An hour later, the discovery or recalling of a fact previously overlooked may change the whole aspect of the situation and make the "truth" which we told a disastrous falsehood. In our false pride, we feel that we must bolster up our professional reputations by assuming an air of omniscience and making diagnoses the first time we see our patients. Here is one of the points where honesty should be developed into a settled policy.

We must study every patient, completely and meticulously—body, emotions, mind and spirit (or character)—in order that we may come as near as possible to knowing the truth, ourselves; and then tell him as much of what we have discovered as will best enable him to cooperate with us in restoring him to health—and no more.

This is an essential part of the Art of Medicine—to know the truth, as accurately as we are able; to establish a *policy* of honesty in all personal matters; and to lie, with artistry and discrimination, when it becomes necessary to do so, in order to establish that larger and higher honesty which means doing the thing which is best for a patient, whether he likes it or not.

An automobile is always rational to the limits of its machinery, but a human being seldom is.—Albert Edward Wiggam.

THE BODY'S DEFENSES

Medicine has experienced three distinct periods in the last two or three generations. A century ago practitioners recognized that they were dealing with a *man* who was ill, and directed their efforts toward doing something to make changes in his body in an attempt to restore its perverted structure or function to normal.

They bled, sweated, purged, puked, blistered, cupped, clysterized and otherwise manhandled the patient. When they gave drugs it was with some fairly accurate idea of what they would do to the *human body*—they had no knowledge of or interest in what would happen in a test tube, in a laboratory.

Then came the period of the laboratory in medicine. The patient became a *case*—merely a complicated apparatus for laboratory experimentation. The only men who *handled* their patients were the surgeons, and they were at a loss unless there was something they could *cut out*. The old, effective, physical methods were discarded, and clinical observations were sneered at as empiric and unscientific unless they could be reproduced in the laboratory, upon dogs and guinea-pigs. That was the period of "therapeutic nihilism."

The era of the domination of medical practice by the laboratory is now passing, and we are coming again to realize that the clinician is the pathfinder in all lines, and that the pharmacologist and other researchers must bend their energies toward finding the explanation of the things observed at the bedside by the practitioner.

In *Surgery, Gynecology and Obstetrics*, for January, 1928, Dr. Paul A. O'Leary expresses, editorially, the new viewpoint, using the most modern ideas in the treatment of syphilis as a text.

Malarial infection will restore about 40 percent of paretics to social usefulness, but the dyed-in-the-wool laboratory man would scoff at it because it does not restore the Argyll-Robertson pupils and the deep reflexes to normal. We are, however, coming to a realization of the prime importance of *clinical* results.

Neither arsphenamine, mercury nor any of the other potent drugs at our command today will *sterilize* the tissues and fluids of the body; but they *do* cure syphilis and other infections. How?

Some syphilitic individuals develop paresis, tabes or aortitis within three years after their infection; in others the disease remains latent for twenty or thirty years, and then attacks the nervous system; still others never manifest symptoms of neurosyphilis, under identical conditions of environment and treatment. Why?

The answer to these questions takes us back to the conception that the patient is a human being, whose body is an extremely

complicated mechanism possessing tremendous potentialities about which we know very little, as yet. The only logical explanation of the vagaries which morbid processes frequently appear to exhibit lies in variations in *individual resistance* to deleterious influences.

We are returning to the old concept of the patient as a man; but we return bearing in our hands and brains the harvest of all the intensive research work of the past generation or two and are therefore prepared to undertake a diligent study of the means by which this all-important bodily resistance can be stimulated and exalted.

Certain drugs will do it, especially when they are injected parenterally. Ultraviolet and heat rays and certain types of diet will do it. How and why?

There must be some common factor here, if we can only find it. Perhaps Metchnikoff was right, and it is the leukocytes that turn the trick. Certainly these bodies are increased by injections of the heavy metals, foreign proteins and the like. Perhaps those agencies which cannot be shown to increase the *numbers* of the white cells are able to augment their *activity* in some way, as suggested by Wright's opsonic index.

We must be constantly on our guard lest we be carried away by enthusiasm for some alleged panacea; but we must be equally careful that we do not lean over backward and refuse to give new ideas careful consideration. If somebody says that the leukocytes are the chief factor in bodily resistance, listen to his story and, if he can back up his claims with *clinical* evidence, accept it tentatively as a working hypothesis and try it, until you demonstrate its truth or error for *yourself*.

The people who pin their faith to "allergy," "*umstimmung*," "side chains" and other mechanisms of immunity may be right, but they have not, so far, explained their theories in terms which are readily grasped by most clinicians, and they have not proved that the leukocytes are a negligible factor. Perhaps both are right, and the answer will combine the two ideas.

The significant and encouraging aspect of the whole matter, however, is that we are returning to the idea of the *human body* as the most important consideration in the study of disease and its cure and are applying our newer scientific knowledge to investigating its reactions and possibilities.

Leading Articles

The Physician's Responsibility in a National Emergency*

By GEO. A. SKINNER, M.D., Omaha, Nebr.

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THE routine life of the physician in civil practice, his basic training in college and his entire habits of thought are diametrically opposed to the needs that develop in war time. All of his efforts are directed towards saving the individual, or possibly, in some instances, to the prevention of disease and disability. He is concerned with the preservation and restoration of the individual patient, and works entirely for the good of the individual. This is, of course, as it should be, the patient in every instance being the center of effort.

A complete change of mental attitude becomes necessary when a major emergency exists; that is, when national existence is threatened and war is declared. Then the individual needs are submerged in the needs of the mass. The doctor must revise his methods of thinking and practice. His task then becomes that of helping to protect the Nation, at the expense of the individual. The humanitarian motives that have been completely dominant in his philosophy of life must be remodeled to fit an entirely new environment. Military requirements now dominate, and everything must be subordinated to the needs of pitiless war. War has ever been the most wasteful of all human functions, and in nothing is it so destructive as in human life. Our task then becomes that of conserving that human life and activity in every way, for the sole purpose of defeating the national enemy.

The medical officer is one of the most important factors in the Army in maintaining the fighting forces at their maximum. His work at the beginning will be the selection of material suitable for active service and eliminating the unfit. This he must do by rather arbitrary and sometimes apparently hard-hearted methods. From

the beginning of a major conflict to long after the close of hostilities, the surgeon's work is that of sorting and selecting, not with the view of the good of the patient only, but with the primary purpose of considering the good of the Country.

For the purpose of this discussion we will assume that, at the outbreak of a major emergency, the physicians either are already in the Reserve Corps and partly trained, or immediately volunteer their services. Of course, in real life this is not possible, as some are probably physically unfit and others would be detained for various other reasons.

Those who have had training would be immediately assigned to positions of importance, such as executive officers, commanding officers of hospitals and medical regiments, regimental surgeons, etc. Those who are now assigned to such positions in the Reserve Corps or National Guard would at once be placed on active duty and start in on the training of their organizations.

At the beginning, one of the most important positions is that of recruiting; that is, selecting the men who are to go. It is not a pleasant job. In fact it becomes very much of a grind after the first few days, but it is a function of major importance and requires a large number of men to handle it. Men with little or no military training can help in this work, under the supervision of trained men.

Many of the men who have had no training would probably be assigned to camps, or possibly to hospitals, where their training would be as intensive as possible so as to fit them at the earliest practicable date for active duty with troops.

The Medical Officer

There is a general idea that a doctor, because of his medical training, is all ready for duty anywhere in the Medical Department of the Army, but those who have had military training, and especially those who

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saw active service during the World War, know how very far from the actual facts this really is. It is true that the average doctor in civil practice can make a first class physical examination. It is also true that he could carry on fairly successfully in a hospital ward; but these are only two of the many functions in which the medical man in the Army, especially in times of hostility, is expected to be proficient.

First of all he is a soldier and must know how to care for himself under field conditions where stress, exposure and danger are constantly present. From the very beginning his will is subordinate to that of some higher commander—and the "line," or active fighting force, is ever supreme. His business is to make this "line" of the army the best possible, and to that end he directs all his energies, however much against his will, traditions, training or religion it may be. He must be able to advise his Commanding Officer as to the safety of the water supply, camp sites, food, the housing facilities, the contagious disease problem, etc. He must know how to organize, train and command troops in the same way that the line officer does, though usually on a smaller scale. He must be able to procure supplies for his own department. He must know what to do with the sick and wounded from the front or from intermediate or rear stations. He must be able to read maps, because he may be directed to be at a certain place at a certain time with his command, and has only a map to guide him. He must be familiar with animal and motor transportation in order to move his sick and wounded successfully. He must be a good deal of a psychologist and pick out the men who are really "gassed," and those who *think* they are; to select the men who have real injuries and those who have only "cold feet." He should be familiar with mess management and with recreational activities to some extent. In fact, the successful medical man must be an all-around Army Officer, in addition to being a first class doctor—and the job is no small one.

Recruiting

We will now assume that we are working with Reserve Officers who have been at least partially trained. What are the problems of recruiting?

Many think of recruiting as merely a physical examination, with the rapid selection of those who are physically fit and the

rejection of those who have disabilities. That is true, so far as it goes, but it does not go far enough. If we are ever unfortunate enough to have another major emergency similar to the World War, it is probable that every man, woman and child who is mentally competent will be required, in some capacity or other. We must not lose sight of the fact that the man on the front line must be supported all the way back, and that it takes from five to seven able bodied men in the intermediate and rear sections to keep one man on the front line. Back of these five or seven, for every front line man, must stand the entire productive population of the country.

Our task then is more than merely selecting the able bodied. These, of course, must be selected with the same care that has always been used, because it is only the physically fit that can stand the strain of the combat and near-combat areas; but we must not reject all those who have small disabilities. They must be classified and put into positions where they *can* serve. Undoubtedly, there will be a draft, as there was in the last war, only on a much larger scale. Also, undoubtedly there will be as many excuses for not serving as there were in the last war, and it is here that the doctor must begin to get "hard-boiled." So long as a man is not mentally incompetent, I believe that he will be required for some service, and that the draft will be universal, both of men and material resources.

One major problem would enter in, perhaps to a greater extent than it did in the last recruiting; we must have some better means of eliminating the mentally unfit. We are making progress along that line, but there is still much to be done. Those who are connected with the Veterans Bureau work know of the increased problem of the mentally incompetent, who are still being added to the Government's burden from the World War—after ten years of peace! Much of this could have been entirely eliminated had the methods then known been fully applied. The low grade moron, the mentally infirm without power of adaptation, the epileptic, in fact, all potentially insane persons, of whatever classification, must be eliminated.

The Army is now experimenting with tests, which will undoubtedly soon be adopted in all recruiting stations, to sort out these psychopathic cases and to at least diminish the problem of the mentally unfit in the service, even in peace times. We

all realize the difficulty, in a brief physical examination, of recognizing mental disabilities, epilepsy and the like, so that some method must be worked out that will care for this problem, and it is to physicians in civil practice that the Army must look for valuable suggestions along this line.

Contagious Diseases

After the selection has been made, the men are sent to the various smaller concentration camps, which will probably be the military posts closest to their own homes, where the preliminary training will be conducted. What is the major problem of the first assembly of a large body of troops? Undoubtedly, that of contagious diseases, and the old saying, that no army is of value until it has had the measles, is founded upon hard facts; so that it has been customary, as troops come into these camps, to isolate them in small groups into what is known as "working quarantine" until the incubation period of practically all the contagious diseases is past. By this is meant that an organization, usually a company, goes on with its active training, lives in its barracks, develops its mess, etc., but does not mingle with any other command, go to picture shows, boxing contests, etc., until after a two-week period with no new case of contagious disease. During this time the organization is inspected twice daily and men with any sign of eruptive or other contagious disease are sent to hospital for further observation.

Of course, immediately following the recruiting, the men have been protected against smallpox, typhoid and paratyphoid fever; and perhaps before any need will arise again we will know how to protect them against measles, mumps and scarlet fever. This is much to be desired and would tremendously reduce the difficulties of mobilization. Then comes the problem of the disease carrier and the constant inspections for the first sign of contagious diseases. The venereal problem is a large one, requiring constant vigilance and instruction to new troops; so that the medical man is one of the busiest men in the camp.

After the troops are seasoned and trained they will be moved to the large concentration camps near embarkation points, for transfer to duty in the combat areas. This training process will eliminate a certain percentage of them, so that those who go will be of the finest physical ma-

terial. Here, again, the doctor will be called upon to make the selections, and often his sentiment and his knowledge will be in direct conflict. Men who are physically incapable of standing the strains but who have indomitable spirit, will wish to go and the surgeon must say them nay. Men who have every necessary physical quality, but practically no spirit at all, will wish to remain, but he must bid them go, and in no uncertain terms. Then there will be a fair percentage of men who can be made physically fit by proper training or by minor surgical operations—the men with hernia, varicocele, flat feet, poor posture, faulty development. These men will probably be grouped into special development battalions and will require the constant supervision of trained medical men.

The Medical Department is no longer simply a few doctors, ready to look after the sick and wounded in a more or less hap-hazard way. It is a complex, highly organized and highly trained, major Department of the Army, and one on which depends much of the success of the fighting forces. It is upon the ability of the Medical Department to keep men on the fighting line that the success or failure of a major engagement will depend. If our department is incompetent and allows able-bodied men to get to the rear in hospitals, etc., we weaken our lines just to that extent. On the other hand, if we are incompetent and allow faulty material to reach the front, we cripple our forces by having them break down under stress and this forces the necessity of evacuating them to get them out of the way.

Need for Preparedness

One thing that stands out with special prominence, as we look over the history of the United States from its beginning, is our utter lack of preparation for a major conflict. We have been highly optimistic and assumed that each war ends war and that we will never have another one. This has been the hope, but it has not been founded on anything that can be discovered in history. Up to the present there has been a major conflict, at least with each generation. We constantly hope that we will advance so that no further conflict will be necessary, and undoubtedly many forces are acting in that direction, but until there is something more definite available than can be seen at present, I believe that no thinking person will be willing to assume

that there never will be need for an Army or Navy again. We certainly are not willing to do without our Police Departments, our Fire Departments, our Insurance, etc., in every day city life, and until we can get along without these, there is no reasonable prospect that we can do without the Army and Navy. I do not mean to have either of a size sufficient to be any great burden, or in any militaristic sense, but just an ordinary, sensible preparation for things that might happen, even though we hope all the time that they will not happen. Those of you who carry accident insurance do not do it with the hope of using the insurance but to protect your families in case some unexpected thing does happen.

Until after the World War, the United States Government had never adopted a real policy of preparation for defense. In 1920 such a policy was adopted and most of you are familiar with it. We now have the Regular Army, the National Guard, and the Reserve, constituting one National Army, all working together for the purpose of preparing for a National Defense.

In view of the foregoing, it will be apparent that a certain amount of training is essential for every able-bodied male citizen, as it is upon the citizenship that we must depend for protection if any enemies should attack us. I say, attack us, because nothing has ever developed in our history that would lead any one to think that we were an aggressive nation. What methods then, are available for those who desire training?

Training Camps

Starting with the youngest, we have the C.M.T.C.; that is, the Citizens Military Training Camps, which offer training for boys of high school age, and this training is becoming increasingly popular and valuable each year. Then we have the work for the older boys, of college and university age, and the Reserve Officers Training Camps carry the training on to such a point that the young man is commissioned in the arm of the service that he elects for his training. During this training, the Government pays the young men a ration allowance during the school year and sends them to camp and pays them for their time while there.

The Officers Reserve Camps are the training camps for men who are already commissioned, and the Government gives two week's training each year to a certain

percentage of these officers. Not yet have we been able to have them all present at any one camp, as Congress has not appropriated money enough for this training, but as the demand becomes more urgent, from the Reserve Officers themselves, a more liberal allowance will undoubtedly be made. This, of course, is something that the Regular Army Officer has nothing to do with, except to recommend it.

These camps, which occupy approximately two weeks in the summer time, offer more to the Reserve Officer than training in military matters. They bring him into contact with some of the finest men of his section of the country, and the comradeship and goodfellowship of the camp is one of the finest things we have. It offers him a vacation that, especially to medical men, is entirely different from any line of work that he is doing, as the training is essentially military in every phase and teaches the application of the medical knowledge that he already has to the problems of military life. Most of the camps are in delightful locations, which offer an ideal summer outing for the family as well as the trainee, and the officer draws the pay of his grade while on duty, as well as travel expense to and from the camp.

In addition to the camps there are correspondence courses on every phase of military training, and these are available to any of the Reserve Officers who wish them. Regulations are tightening up a bit and the Reserve Officers who do not find time to devote a little effort to keeping up with their work will be placed on the Auxiliary Reserve until such time as they are able again to take up their military activities.

You medical men in particular, appreciate that it requires a large investment of time and effort to keep up with the progress in your profession. The same is true in the military profession. We require constant effort and study to keep up. We do not expect the men who are in civil life, and who take up military training as a patriotic duty, to keep up as the Regular Army men must do, but we do think that they could devote from one to two hours a week to this study, and many of them devote a great deal more time than this. In fact, it is highly commendable and almost a mystery, sometimes, to know how some of our leading surgeons and physicians manage to become so well posted in military matters.

With the correspondence courses, in the larger centers of population, there are conference courses, at which officers of the Regular Army act as instructors and help to solve the problems of the student-officers. Suitable credit is given for each correspondence course covered, conference attended, camp duty, etc., and 300 hours of work are required during five years.

Summary

In a major emergency the medical profession will be responsible for the following duties:

1. Selection and classification of all mentally sound men, and perhaps women and children, for service to the Government.
2. Rejection of the mentally unsound or potentially unsound. This is one of the most important of the duties as it bears a direct relation, not only to the immediate welfare of the Government, but to its welfare for years to come.
3. Intensive training for duty with troops in combat, intermediate or rear areas.
4. Some training should be sought by every able-bodied male citizen of active age, as a patriotic duty. Those too old for service or physically incapable can do much by informing themselves as to the purposes and results of the various possibilities of training offered by the Government: the Citizens Military Training Camp for boys 18 to 20; Reserve Officers Training Camp for young men with educational qualifications for commissioned grades; Officers Reserve Corps Camps, which are dependent, not only on the willingness of the officers to attend, but upon the cooperation of their employers, in giving them time off to attend. The approval of the medical profession of this training, and whenever possible, a favorable word to the employer, is a great help and a valuable contribution to the Government's plans.

We find, then, that there is something that each of us can do in this important matter of preparation for National Defense.

Fort Omaha.

Tuberculosis in Children

By CLARENCE L. WHEATON, M.D., Chicago, Ill.

THE importance of childhood infection with tuberculosis cannot be overestimated in our efforts to eradicate the disease and check its progress.

In infancy tuberculosis increases rapidly as the age progresses. After the age of seven it loses its tendency to generalization, thanks to the increasing powers of resistance to the germ, and at this time it may run a chronic course or even become healed.

The greatest number of cases of tuberculosis of childhood infection are not of congenital origin, the disease having been contracted outside, after birth. Tuberculosis of the parent acts by producing infection to the family and also by producing an increased sensitiveness to external infection.

It is not to be questioned, with reference to the germs themselves, that the bovine type of tuberculosis may be dangerous for children, and the younger the child the less favorable are the conditions for resisting the infection. The chief source of infection, however, is the human type. The channels by which the germs enter the

child's body are known. Aerogenous infection plays an important part in children; but, especially in infants and younger children, is in fact, a less frequent cause than is intestinal, alimentary infection.

Bone, gland and joint disease are usually manifestations of the bovine type of tuberculosis; the human type is tuberculosis of the lungs, or consumption. With the enforcement of laws pertaining to the testing of milk herds for tuberculosis and the pasteurization of milk, bone and joint disease is rapidly disappearing among the children of our large cities.

It has recently been shown by Freilich, Lewison and Ragins (*Archives of Pediatrics*, July, 1927), that during the years 1921-1925 inclusive, there were registered at the dispensaries of the Chicago Municipal Tuberculosis Sanitarium, 10,340 open cases of pulmonary tuberculosis. During the same period there were 600 children in whom a diagnosis of pulmonary tuberculosis was made, and of this number 173 showed positive sputum. These authors state that post-mortem records at the Cook

County Hospital show that a large percentage of children who have died with a clinical diagnosis of pneumonia or bronchopneumonia, the disease proved to be tuberculous in origin. Of the 173 cases 113 gave a history of having had measles, whooping cough or both.

Tuberculosis in childhood deviates in a somewhat characteristic way from that in adults. This, in large measure, is due to the fact that the organism of the child has less resisting power to the same infection; the tissues of the child have less power of reaction against the disease, apart from the increased susceptibility to contagion in childhood.

In 1903, von Behring and Cassil advanced the theory that tuberculosis infection occurred usually in infancy, the disease remaining latent until the powers of resistance were so lowered by acute disease, malnutrition, or over-exertion, that it flared up as a smouldering flame. The bovine germ plays an important part in this conception.

In England, among 500 children dead from tuberculous infection, the highest rate (more than 25 percent) occurred between the ages of one and two years. There was a rapid fall to a relatively inconsiderable number after the sixth year. It is fair to assume that the mortality curve in tuberculosis, as shown by Gittings, reaches a high point shortly after infancy, between two and four years of age; a low point in later childhood, between ten and fifteen years; and a general rise thereafter, with the highest point between thirty and forty years or later.

It is reasonable for us to assume, from our observations following the reaction to tuberculin, that the vast majority of tuberculous infections do not cause an immediately fatal illness. The reaction to tuberculin is proof of a tuberculous focus somewhere in the body, either active or quiet. Infection with the bovine strains of the tuberculosis germ is not rare in fatal cases of abdominal tuberculosis. It has been found in 6 percent of cases of pulmonary tuberculosis, and by some observers it is assumed to be quite common in the less fatal forms of tuberculosis—that of the glands of the neck.

Doubtless a large proportion of the bovine-infected children furnish positive reactions to tuberculin. As yet we have no definite evidence that the bovine germ

of tuberculosis ever changes its characteristics during its life in the human body, yet this germ seems to disappear in the tuberculous disease of adults, with the exception of that in the glands of the neck.

It is therefore reasonable to assume that, as the tuberculous lesions of childhood heal, the germs perish and disappear. If, in later life, an individual so infected should die from the human type of the disease, it is probable that infection was acquired subsequent to the bovine inoculation, although this may have stamped him as tuberculous in childhood. There is no evidence forthcoming to disprove or to show that the pre-existing bovine infection furnished protection to tuberculous invasion equal to that from the human germ.

Childhood infection, therefore, with the bovine germ, would in some measure account for the considerable percentage of positive tuberculin reactions in late childhood. It might explain in part the relatively small percentage of fatal tuberculosis in childhood, as compared with the percentage of positive reactions, in no degree lessening the probability that infection with the human type of bacillus can be acquired after childhood.

In view of the great prevalence of tuberculosis in early years, the importance of the crusade for the education of the public regarding the disease becomes apparent, especially as to its prevention. In the homes where children are born to tuberculous mothers, the dangers of infection of the infant already exposed are exceedingly great. It is needless to say that a tuberculous mother should not nurse her child under any circumstances, and every measure of protection should be thrown about the little ones in supposedly healthy families; and the same measure of protection should extend to those homes wherein resides a consumptive invalid. With impaired nutrition, a great susceptibility to infection exists in the home of the consumptive invalid, and tuberculosis may develop at a very early age in those homes where children may be exposed to the germs of the disease.

The protection of the milk supply is of the greatest importance. Measures to prevent its contamination with bovine germs should be taken. Diseased cows with tuberculous udders would readily contaminate the milk and spread wholesale infection. Milk from healthy tuberculin-tested herds

only should be supplied to the public for their consumption, and the laws regarding the inspection of cattle cannot be too rigidly enforced in our efforts to avoid bovine infection.

Infants should at all times be kept from contact with consumptives in the household. The child should be removed from the home of an open case of tuberculosis, and in some cities this is, by law, compulsory.

It is a matter of common knowledge that school children are often poorly nourished and under-fed. As a result of this, they soon lose their powers of resistance and become more susceptible to disease. In all schools, opportunity to receive light nourishment between meals should be afforded school children. The playground, with its opportunities for diversion and recreation in the open air, serves a useful purpose and contributes much to the nurture and well-being of our children.

Long hours of confinement, the denial of fresh air and sunshine, in ill-ventilated

shops, must inevitably result in an acquired predisposition to tuberculosis. The municipality which blindly permits criminal disregard for the laws of health, decency and humanity, so far as concerns those regulations affecting child labor, pays dearly the penalty exacted.

The lessons of hygienic science should be brought to those approaching manhood and womanhood, not alone in their relation to ventilation and cleanliness, but, as Bonny has said, to the baneful effects of alcohol and the detrimental physical consequences of late hours, with other forms of over-indulgence.

Intemperance of any kind, be it alcoholic, athletic, a reckless abandonment to sexual dissipation, or an undue devotion to steady work, will surely sap the energies of the young and impair their usefulness in after life, and in all probability make them an earlier and easier prey to the common ravages of tuberculosis.

25 E. Washington St.

Neurotic Ulceration

By J. HENRY DOWD, M.D., Buffalo, N. Y.

AN ulcer is a solution of continuity in flesh or bone in which there is a loss of substance; this, to the practitioner of medicine, is not news, nor would it be news to say that every ulceration, no matter where situated, has a well defined cause.

Speaking from an academic standpoint, the base of all ulcers will be found inflammatory, and accompanying the inflammation three factors are always necessary: congestion, lack of resisting power and bacteria.

We hear much today of hormones and antibodies—substances which are produced in the system or by ductless glands and poured forth into the blood stream to act on different organs and tissues of the body; some specifically, others by producing resisting power to disease due to bacterial invasion.

Ductless glands may be viewed from exactly the same standpoint as the automatic oil cups on a locomotive. But let the question here be suggested; does not oil cease to flow from the automatic cups the moment the locomotive stops? In fact, will it not be lessened with any interference with normal action of the engine? Of

course there may be such a condition present as atrophy of the glands, but the same result may occur from insufficient action on part of the body as a whole.

All glandular action is due to the motive power supplied through the nervous system, which originates in the brain cells. From this source we also receive the power for the production of resistance in the mucous membranes. This can scarcely be considered as a hypothesis; it has been proven that the cutting of the nerve supplying the suprarenals at once causes the secretion from those organs to cease.

Any deviation from the normal state, occurring in the heavens or on this terrestrial sphere, involving things animate or inanimate, has a cause; therefore, to be successful in the treatment of the sick, we, as physicians, must ascertain the cause and remove it when possible.

Fundamentally, the most important factor in inflammation is congestion, and congestion is due to irritation, plus a lack of resisting power.

To attempt to enumerate the causes of congestion would be far beyond the scope of any one medical article. I will therefore

confine these remarks to one variety—those in which congestion is due to the nervous system—either an irritation of the neurones, as will be shown by a high alkaline phosphatic output, or a deficiency of nutrition in the cells, shown by a negative phosphatic index.

It will not be authoritatively stated that all congested areas upon which inflammatory action arises, resulting in ulcer, are affected by the nervous system, but in at least 95 percent of cases that system will be found to be at the bottom of the condition.

Although the skin may become involved, as in herpes zoster, the mucous membranes seem to be the chosen field for neurotic congestion that is followed by inflammation. Mucous membranes subjected to irritation are more prone to involvement than others, yet we find, at times, that no mucous surface is immune. The covering of the cornea can scarcely be considered as mucous membrane, still here we find congestion followed by inflammation and due to nerve involvement in practically every case; I refer to phlyctenular ulcer.

From the eye downward, all mucous surfaces may become involved: the nose, throat (note case reported by Dr. Mehl), mouth, stomach, intestines, bladder and prepuce.

In the reported cases, treatment of all sorts had been resorted to, but without relief. When cared for according to the readings of the phosphatometer, which ascertained the true cause, fully 95 percent of them responded at once; if it was not the nerve cells that were at fault, what was it?

Too many of the fundamental principles of diagnosis and treatment have fallen into oblivion during the past few years, chief of which is the fact of the importance of the nervous system as a factor in life.

No one can deny the effect of sunlight, fresh air and, above all, tranquility, in anemia, nor can any one question the rapid improvement following the use of iron in anemic conditions; and the same may be said of the effects of calcium and ultraviolet rays in such conditions as rickets.

But the nervous system goes a step further than does either blood or bone; it must supply motion and sensation at all times, and thus we find that a reserve has been created for such times as, from illness or otherwise, food cannot be taken by the mouth to supply the demand.

In the treatment of ulceration of neurotic origin, in fact, in any case where resisting power is low, if the reserve is below "NP" on the phosphatometer scale to any marked extent, but very little improvement will be manifest until it is brought as near to normal as possible. It is simply looking at the subject in the same manner as one would consider the blood; that is, if we had a wound that would not heal, and the red cell count showed a deficiency, only the ultrascientific would do otherwise than supply the need by giving iron.

The estimation of the alkaline phosphates which show nerve cell metabolism is so well known and extensively used today that little need be said about it. One important consideration must be stated: fully eighty percent of medical practitioners are still doing what may be termed a general practice, and at least fifty percent of these men and women are so situated that they cannot avail themselves of the services of laboratory technicians, some due to distance others for financial reasons.

Ascertaining the phosphatic index is a very simple procedure, taking but ten minutes. The solution used (magnesium sulphate, ammonium chloride, 10-percent water of ammonia—the common kitchen variety—of each, 1 ounce; water 8 ounces) is very cheap and can be made by any one in a few minutes, although it is a good idea to let it stand for three or four days before using, to allow for thorough saturation. The technic is equally simple. Use the second urine passed in the morning; fill the phosphatometer to "U"; add solution to "S"; shake thoroughly and set aside for ten minutes. This solution should turn milky at once, and if the sediment at the end of ten minutes is viewed under the microscope, crystals such as you have never observed before will be in evidence.

If at the end of ten minutes the precipitate remains at "NP" (phosphatometer) and the crystals are of the "A" type,* no matter what may be the symptoms present, the nervous system can be eliminated as a cause.

If the precipitate remains above normal, the reserve is being drawn upon and sooner or later depletion must take place, with crystals denoting a lack of adequate nutrition. This condition is always accompanied by distressing symptoms, for which neurasthenia might be a good name.

*See CLIN. MED., Dec., 1926, p. 869.

When the precipitate falls below "NP" or will not sink at all, not only the reserve has become depleted, but generally speaking the nutrition supplied is of an inferior quality, as will be shown by "B" type crystals.

With the living habits of the people today, when energy is used far in excess of any normal standard, this condition will be found in fully 90 percent of all cases of illness, and especially so in what might be termed obscure conditions—conditions where most careful examinations show no pathologic changes.

The crystals as they appear under the microscope are of the greatest value at arriving at conclusions. Crystals of the "A" type may be found with either a plus or minus index; in the latter they are the same as finding a low red cell count with normal hemoglobin. "B" crystals may be found under the same conditions, but generally in about 95 percent of minus readings. They indicate a lack of nutrition, exactly the same as would a drop of pale blood on the hemoglobin scale. "C" crystals show pregnancy three weeks after conception and up to the end of the third month. Although I have used these crystals to great advantage, they must not be considered as infallible. "D" crystals, which appear amorphous, I have found many times, and, in fully 98 percent of these cases, the patients were adjudged insane within from six months to a year or more after the findings and were committed to an institution; those who were not insane suffered from melancholy and recovered as far as that class of patients ordinarily do. "E" crystals resemble "A" or "B" but are only about 1/16 inch in diameter, in contradistinction to about 3/8 inch with the others. They are always evident in highly neurotic states, especially hysteria, where they are of the greatest value in making a differential diagnosis.

In the treatment of ulcerations of neurotic origin, careful attention must be given to assisting nature's methods of healing; that is, anything that adversely affects normal methods of repair must be avoided. For instance, a bright light, especially sunlight, is most irritating to ulcers of the cornea; and food that may be difficult to digest, or is long retained in the stomach, acts as a detriment in involvement of the gastro-intestinal mucous membranes.

Case Reports

Case 1.—Man, a mining superintendent, had suffered repeated attacks of phlyctenular ulceration of the cornea for about two years. Several oculists saw the case; he made a visit to Philadelphia, but every three or four months the condition would recur. Careful examination of the urine showed nothing pathologic; the phosphatic index was 70 percent, minus, with "B" crystals.

A mixture containing phosphorus, cannabis indica and nux vomica* was prescribed, half a teaspoonful in milk after meals.

At the time this examination was made he was suffering with a severe attack; the pain was very marked. In three days the pain had subsided; in a week it was entirely absent and he could look at the light without trouble. In five years he has never had a return of the ulcers.

Ulcerations of the lips, commonly known as cold sores, and the same occurring in the mouth, as canker sores (mucous patches should be eliminated), are of neurotic origin in practically every case. In this condition the phosphatic index will generally be found plus and prompt relief will follow the administration of sedatives; I use sodium bromide in elixir of valerianate of ammonia.

No phosphatic index was taken in the following case (although there is no doubt that it was minus), reported by Dr. Mehl a laryngologist:

Case 2.—Showed ulceration of the pharynx. Wassermann test negative, but the patient was treated for syphilis, as the condition looked very suspicious of that disease, with no result. Curetting and cauterization seemed only to aggravate the condition. It was not tuberculous.

"I prescribed compound phosphorus mixture, more as an experiment than otherwise. In three or four days cicatrization was evident; the ulcer was closed over in a week or ten days; the patient gained several pounds in weight in the next two weeks. Phosphorus seems a most valuable drug in ulcerations of the mucous membranes of the nose and throat."

Ulcers of the prepuce or labia majora must be differentiated from venereal ulceration, either simple or specific. When neurotic, they occur as small, pin-point abrasions; several are present; and they are generally painful. Although stricture will at times be found and must be treated, it is the contraction acting through the ner-

*R Tr. Nux Vomica.....20.000
Ext. Cannabis Ind.....0.250
Free Phosphorus.....0.020
Glycerine q.s. ad.....60.000
M. et Sig: 80 drops in milk, after meals.
(Note: This gives 20 drops of nux vomica, 1/2 grain of cannabis indica and 1/100 grain of phosphorus to each dose.)

vous system that produces the solution of continuity.

Herpes zoster is purely a neurotic condition, and no case of herpes, no matter where situated, either on skin or mucous membrane, should be treated without ascertaining the condition of nerve cell nutrition.

Case 3.—Mrs. A. A., a most aggravated case of right-side shingles. Pain of a burning nature was very severe. All imaginable treatment had been used for at least two weeks, with no result. Nothing of a pathologic nature was found after a careful urinary examination, except a phosphatic index 80 percent minus and "B" crystals. The same phosphorus mixture was ordered, plus about 15 drops of fluid extract of valerian, to allay the irritability that existed, due to the long-continued pain. In 48 hours there was some relief; in a week the pain had entirely ceased and the eruption was practically gone; she gained 5 pounds in weight in two weeks.

Ulceration of the mucous membranes of the stomach and intestinal tract, generally duodenal, is a subject much discussed these days in medical circles. The surgeons advise operation in all cases; whereas the physician says that only 10 percent require surgery. There is very little doubt that a goodly number, if not the great majority, of these conditions are purely neurotic. First, there is an inherited gastrointestinal tendency, foods of certain quality, especially when raw, cause discomfort; second, the use of foods that cause irritation, resulting in congestion; and third, abuse of the motor power of digestion (nervous), either by the extra calls for energy, due to the rapidity with which the American people are living today, or abuse of this system by overwork, study, etc.

Viewing the reports of statisticians who say that stomach disorders are increasing and that fully 90 percent of them are functional conditions, is it not fair to assume that the mode of living, with other factors (troubles, worries, etc.) are important causes, especially as it must be admitted that the processes of digestion, assimilation and metabolism are entirely under the control of the autonomic nervous system?

Case 4.—Justice T., referred in consultation for "stomach trouble," in which many nervous symptoms were present. Careful questioning regarding the conditions, which had existed for about a year, pointed to gastric ulcer.

The family history was most interesting in this case, in regard to heredity. The

father, a farmer, had always been troubled more or less with "stomach trouble," "heart burn," "gas," etc. The oldest son had almost the same condition, but greatly aggravated; he was a financier. The youngest son had not known when he could eat as other people do without discomfort; they all, including this patient, had always taken soda when "the stomach was bad," for years.

There were two girls in the family, who were entirely free from any symptoms referring to the stomach or intestinal tract.

Careful examination of the urine revealed nothing abnormal, so far as the kidneys, bladder, diabetes, etc., were concerned, but indican was greatly increased and the phosphatic index was 80 percent minus, with "B" crystals.

The same mixture of phosphorus was ordered, in half-teaspoonful doses, half an hour after meals, in milk; to this was added resin of podophyllum, 1/10 grain, as his bowels were very inactive. He was advised to avoid raw food, especially for a time, until the index and crystals reached approximate normality.

All distress after eating disappeared inside of a week; he could eat anything with out trouble in about ten days; at this time the phosphatic index was about 15 percent minus and the crystals were practically normal.

This patient enjoyed the best of health for about seven years when, after a strenuous time in court for several months, the former symptoms recurred. He then visited a surgeon, who diagnosed an ulcer, found it and performed an operation for its removal. Less than two years have elapsed; symptoms are recurring; will it be operation or medicine next?

Scores of cases of an almost similar symptomatology (in many of these, so far as symptoms could lead one, there was no doubt that peptic ulcer was present) could be reported, where treatment directed to the nervous system, as indicated by the phosphatometer, was followed by most gratifying results. One woman who even had hemorrhages has had no trouble in many years.

But these conditions do not always show a minus index, as will be shown by the following case:

Case 5.—J. B.; age 55. For a long time this man has been a sufferer from symptoms referable to the digestive tract, especially, from the symptoms, the intestinal portion. The characteristic symptoms of duodenal involvement were much in evidence: constant and, at times, very marked "gnawing," as he described it, on the right side in the region of the liver. This was relieved, to a great extent, even by the eating of a cracker, which he kept close at hand at night when the trouble seemed to be worse. There was no doubt that duodenal ulcer was present.

He was apparently normal otherwise, except for a neurotic strain from which the whole family suffered. Careful urinary examination revealed only a great increase of indican, marked acidity, and a phosphatic index 75 to 80 percent plus.

The case being of long standing, bromide of gold and arsenic* was ordered, commencing with 10 drops and gradually increasing up to 20 drops.

There was no apparent relief for about

*"Bromarsarum"—10 drops contain 1/20 grain of gold bromide and 1/40 grain of arsenic.

two weeks, when the distress seemed to become modified. From this time improvement was more rapid; in three weeks he was entirely free of any trouble; no gas nor distress. He has remained well up to the present time—3 years.

As to the location of local foci in ulcerations of the mucous membranes, I would suggest looking to the brain cells first; the cause will be found there in practically every case.

437 Franklin Street..

Chronic Prostatitis and Its Treatment

By CURRAN POPE, M.D., Louisville, Ky.

Medical Director, The Pope Hospital.

PROSTATITIS is not only one of the commonest of diseases, but it very frequently is a source of focal infection. It takes time and care to examine the prostate properly and no diagnosis should be made of this chronic infection until the urine and the prostatic secretion have been thoroughly studied microscopically. This important condition is, not only neglected in diagnosis, but rarely treated with the thoroughness and patience that it deserves.

We can consider prostatitis as causing three classes of symptoms: First, those that are local; second, those that are reflex or transferred; and, third, those that are psychic.

We have, of course, in the local symptomatology, conditions of discomfort in the urethra, burning on urination, with frequent micturition, especially marked at night. There is a slight matutinal discharge from the urethra, usually of a clear, pearlish-white color.

Prostatorrhea, or discharge from the prostate, together with the prostatic shreds that appear in the urine, used to form the basis of the glaring advertisements of the urinary and sexual quack, who spoke, in the "lost manhood" advertisements, of these signs of seminal loses as being serious, wasteful, and dangerous, when, in reality, they carried with them, as we know, none of those qualities.

In chronic prostatitis there is tenderness of the perineum and frequently suprapubic pain. In a number of cases we find a disagreeable symptom that is rarely dwelt upon; that is the increase of libido, or sex desire, with inability to satisfy it, owing to the inflammatory condition that is present.

Among the interesting facts relating to this disease is one that may lead to error.

The patient may have no symptoms, or they may be very vague, in their relations to the local or prostatic mischief. In fact, this may occur and the silent prostate act as a center of widespread focal infection.

The seminal vesicles are nearly always involved in the prostatic infection. In fact, in my opinion, they are more likely to be the cause of general, systemic infection, while the prostate itself, is more likely to cause local or reflex symptoms.

Do not jump to the conclusion that gonorrhea is always the cause of prostatitis. It can be caused by many other microorganisms. It has been my observation that it is frequently caused by a colon bacillus infection, and that this infection may be as difficult to contend with as those of the gonococcal origin.

Reflex Symptoms

Among reflex symptoms, backache is prominent. This is the typical dead, dull, small-of-the-back ache that is frequently attributed by laymen to kidney disease, and oftentimes graphically illustrated in some of the advertisements of kidney pills and other medicines.

Another ache that is extremely common and is rarely mentioned in the textbooks is what I have been pleased to term the "buttock ache," that comes at the lower portion of the buttocks, and is extremely persistent and disagreeable.

Another condition rarely noticed is that of "calf ache"—the aching of the calves and the tenderness and burning and disagreeable feeling that occurs in the feet. I have "lifted the bony arches" of quite a number of men by treating their prostates. That was quite a feat!

Among the reflexes we should note hyperacidities of the stomach (in the plural, if

you please). Both hyperchylia and a hyperchlorhydria are conditions extremely common in prostatic disease. Functional disturbance of the heart—arrhythmia, rapidity and palpitation—are not uncommon. Headaches are frequent. I find that the upper and the occipital portion of the head is most often affected. In fact, there is frequently an ache and a discomfort in the head that would correspond to the typical location of the transferred pain that comes from uterine disturbances in the female.

Psychic Symptoms

Among the psychic effects (and these are very rarely dealt with as fully as they should be), we may mention mental depression, even to the point of a real, genuine psychalgia, or mental pain. Some of these individuals are actually on the border line of mild melancholia. They are introspective, worried, and troubled with the "horrors" of their condition, which is only too apparent to those who have seen quite a number of these cases. Many of them suffer from a lack of concentration and lack of will power, as they express it. They really do not lack the power. The general nervous upset simply prevents them from shutting out of the field of consciousness the irritation that is present in the prostatic region.

With these cursory remarks, we may proceed to the consideration of treatment. I assume that prostatitis and its accompanying vesiculitis are present and that we do not have to deal with the chronic *hypertrophied* prostate. That requires entirely different methods from those used in treating prostatitis.

Physical Methods of Treatment

No matter what other treatment one may use, in my opinion prostatic massage is absolutely essential in these cases. There are apparently very few men who perform this correctly, if we are to take the statements of patients who tell of the difference between a seemingly comfortable and a very disagreeable prostatic massage.

If we find that the bladder is infected, it must be cleansed—that is to say, irrigated—and the urine, so far as possible, rendered sterile by the administration of some one of the urinary antiseptics.

I purpose to take up a number of physical measures that are of unquestioned value in the general and in the local management of these cases.

In the general management of the case,

we find that the *air-cooled actinic lamp* is very satisfactory and of great value, because of the general influence it has upon the metabolism of the patient. A man with an infected prostate can become decidedly toxic, and it may be just as important to treat the general condition as to treat the local condition, and for that reason, I recommend both measures.

Light may also be used locally with great advantage. In this application, we would, of course, prefer the *water-cooled lamp*, with the quartz extension, so as to bring the rays directly to the prostate itself. It is my practice to use it in this way. I generally massage the prostate first, then allow the patient to void, and after that make the application of the rays. In this way, we have mechanically relieved the prostate of a great deal of secretion and of inflammatory products. The gland is in better condition to respond to the actinic radiation than it would be if we had not preceded it by the use of the massage.

I have seen very little good come from hot water irrigations of the rectum, but if one uses real colonic drainage, proper medication and bacterial implantation, good can be accomplished. The unloading of the colon and its medication improves the condition of the general health.

Heat is one of the most valuable methods that we have. A good many play with heat when it comes to the prostate. I am among those who believe that the day of the vacuum tube has passed and that if we wish to heat the prostate, diathermy is the only satisfactory way to do so. To this end, we should follow the ordinary technic, with the inner electrode high enough to touch the seminal vesicles. Also we will probably find that the *urethral crest* is inflamed, and sometimes, later along, will require special treatment to overcome the inflammatory state; but in diathermy we have a method of heating the prostate, and not only giving relief from pain and frequency of micturition, but possessing a direct curative value that is very considerable.

The heating of the prostate is, of itself, a method of destroying bacteria. Heating of tissues—febrile disturbances—are bactericidal. Fever is often a natural conservative force.

I am among those who believe in a shorter time and a larger dosage. I much prefer to heat the prostate promptly up to the point of comfortable tolerance by the

patient, paying no attention at all to the meter, but governing myself exclusively by the sensorium of the patient. Then, when the treatment is over, I will have noted the dosage that is satisfactory and comfortable for this patient and thereafter I shall have a record of it—but this may not be the proper dosage for the next patient.

Electric Currents

The second agency of which I shall speak is the **static**. In the *static electric current*, we have one of the most powerful adjuncts in the treatment of prostatitis that there is in medicine. It is more valuable than diathermy. I use a strong condenser current, or what is commonly known as "the static wave current." This is accomplished by starting the static machine, putting on two large Leyden jars, introducing the electrode into the rectum, well above and over the prostate, then using slow, heavy, strong interruptions that produce mechanical, thermic and chemical changes in the prostate and vesicles. I know of nothing that can imitate the static wave current in its action upon the prostate.

I have used the **Morse wave Sinusoidal generator**, and it will help, especially if we use the interrupted, slow, swelling effect. If we wish to sedate the prostate with the Morse wave generator, use cam No. 1, which gives the straight sinusoidal current. As the irritation in the prostate subsides, use cam No. 2, which gives short waves or short interruptions of the sinusoidal current; and then, finally, use cam No. 3, or No. 4, which gives strong, powerful contractions, with an intermission and rest between them. In the static between each one of the sparks that cross the spark-gap, there is produced in the tissues a contraction, then a pause, and in this way the prostate is mechanically vibrated at such a speed as to be sedative, as well as contractual.

The **galvanic and faradic currents** can also be employed simultaneously in prostatitis, using the rectoabdominal method, placing the negative pole of *both* the galvanic and the faradic apparatus in the rectum and the positive pole on the lower abdomen, using the *de Wattville switch* to combine and control these two currents. I have five large galvanic outfits, and I have each one of them provided with a *de Wattville switch*. I am the fortunate possessor of about fifteen or twenty of Engelman's old coils, the like of which, I think, we will never see again. I use about 10 or 15

milliamperes of negative current in the rectum and as much of the faradic as the patient can stand, taking the current from the secondary of a No. 36 wire, high-tension coil. This coil is of such high tension that it will light up a Geissler tube.

I do not think much of vibration in the treatment of the prostate, either to the spine or to the prostate itself, but it may prove a very great help to a man's prostate by correcting concomitant conditions that are frequently present; namely anal fissure, anal spasm and other conditions that add to his misery. In this way we secure anal dilation, according to the method I have originated and elsewhere described.

Hydrotherapy

Last comes *hydrology*, or treatment by water—last considered because so little used—but, in my opinion, the greatest of all physical measures. Here we have again the possibility of doing our patient an enormous amount of good by a method that is practically never used or used by so few of us that sometimes I wonder what has become of the medical profession. One would think that in chronic prostatitis the proper thing would be a warm bath. On the contrary, the proper method to use is the cold sitz bath, in which the patient rubs the lower abdomen, hips and thighs.

After the patient comes from the bath, which lasts about ten minutes (the temperature of the water, starting with 80° F. and ranging down to 65° to 60°), there is a reaction. The blood is brought to the surface and the prostate is influenced reflexly, from the cold. A cold foot bath may be of considerable help in reflexly stimulating both the bladder and the prostate. Fifty years ago Winternitz, of Vienna, pioneer hydrologist and my teacher, used the cold sitz and the dripping sheet combined, for diarrhea and intestinal, colonic and genito-urinary diseases, with remarkable results.

A good many people, laymen as well as medical men, know that very frequently cold feet (I mean that in the literal sense) will cause a desire to evacuate the bladder. That is due to the fact that, reflexly, the cold feet are stimulating the contractile fibres of the bladder, and incidentally of the prostate.

In the local treatment, we can also employ what is known as the *perineal douche*. To accomplish this, the patient sits upon a stool, in which there is a hole approximately 3 or 3½ inches in diameter. The water is

applied with considerable force through the opening in the stool. One can use hot water, followed by cold water, or the so-called Scottish douche—alternating hot and cold water.

General tonic hydrotherapy; that is to say, the use of hot and cold showers, rain baths, sprays, hot followed by cold and many other hydrologic methods, are not only good in building up the general health of the prostatic patient, but are good in maintaining the general health of any one who will practice them. There is nothing I know of in the wide range of medicine that will keep a person's arteries so flexible as

will the daily use of cold water. A cold shower in the home is better than a piano, a Victrola, a hat rack or some piece of bric-a-brac.

I am afraid we doctors would have fewer patients if everybody practiced the use of cold bathing (not plunging into a cold tub bath). A shower—moving water—which is a stimulant because of its mechanical contact with the body, is to be preferred. I take a hot shower followed by a cold shower every day that I am at home. In winter it is taken for a very brief period, of course, at river temperature.

115 W. Chestnut St.

The Surgical Aspect of Goiter*

By GUSTAVUS M. BLECH, M.D., Chicago

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THE rational therapy of goiter, whether surgical or medical, presupposes a sound conception of the cause and character of this very serious malady. It would seem that the voluminous literature on goiter should have thrown sufficient light on the problems involved to make this introductory sentence unnecessary, but the fact is that there still prevails a diversity of opinions, and our etiologic and pathologic conceptions have not yet reached finality.

The very nomenclature of goiter is confusing. Terms such as struma, bronchocele, Basedow's disease, Flajani's disease, Graves' disease, Parry's disease, exophthalmic goiter, adenomatous goiter, with and without hyperthyroidism, and even thyroiditis are used in many quarters in a chaotic way. To add to the confusion, the novice hears or reads of such names as Abadie, Becker, Boston, Bryson, Dalrymple, Gifford, Graefe, Guttmann, Jellynek, Joffroy, Kocher, Marañon, Marie, Moebius, Stellwaag, Tellais, Vigouroux, Wilder and others in connection with some sign indicative of one or another form of goiter.

The pathologic classification proves little helpful to the clinician, whose principal concern is the cure of his patients, yet it is pathologic physiology which must enable him to rise above groping empiricism.

It is proper, therefore, to attempt to clarify the situation and to simplify the conception of goiter to enable the general internist or surgeon to arrive at a logical

diagnosis, which, in turn, will point the way to rational therapy.

It will repay us to glance superficially at what scientific research has taught us about the thyroid gland.

Historical Sketch

The recognition of the physiology of the thyroid gland is a matter of comparatively recent history, which reads like a romance, and as it brings out some important points in a striking manner, it is worth narrating.

In the early eighties, Schiff, of Switzerland, had published experiments showing the ill effects on certain animals from which he had extirpated the thyroid gland. These epochal labors attracted no attention or were ignored as theoretical ballast, for Kocher, of Berne, and the two Reverdins, of Geneva, soon after performed a number of total thyroidectomies on patients who were threatened with suffocation by pressure of large thyroid glands on the trachea. From a purely technical viewpoint these operations were marvels of skill, for these eminent surgeons performed feats which, in the hands of less skilled operators, certainly would have resulted in serious injury to or destruction of the parathyroids. The patients left for their homes, grateful to have been relieved from their indescribable agonies.

But some time later these surgeons heard that their brilliant operations had very serious after-effects. The patients almost uniformly complained of great fatigue, weakness, heaviness in the extremities, mental lassitude, increasing swellings of the skin

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of the face, hands and feet, dryness of the skin, falling out of the hair and a peculiar change in the physiognomy. The female patients complained of amenorrhea. Closer examination revealed a diminution of the red blood cells and the presence of a mucin-like deposit in the subcellular tissue, resulting in a peculiar doughy swelling of the skin, which eventually was termed myxedema. It was also noted that the younger patients showed that their growth had been interfered with.

Unfortunate as had been the failure of Kocher and the Reverdins to familiarize themselves with Schiff's labors, the sad lessons struck home in too forcible a manner, on too fertile a scientific soil not to produce a great deal of good, for after some groping, the idea that the thyroid was merely a pad for the neck, whose blood supply served as a sort of a safety device for the circulation of the brain, had to be abandoned as fallacious. It became perfectly clear that the thyroid had definite functions affecting the weal of the human economy, and it became the mission of medical science, not only to discover the character of the thyroid function, but to find ways and means to aid those who suffered from the effects of the absence of the gland—research which eventually proved of tremendous value to cretins. Laboratory and clinic then began to work hand in hand, and the amount of productive and profitable research that has been accomplished commands a great respect for the pathfinders in our profession.

Thyroid Physiology

Physiologists went to work systematically. First of all it was demonstrated beyond any doubt that the thyroid is morphologically a gland of the alveolar type, and embryologic investigation traced the beginning of colloid development to the fourth month of fetal life. It was assumed from the first that the colloidal material contained the active principles or substances which affect the general system.

Studies were undertaken to determine whether the thyroid functions independently or in connection with other glands. The final verdict has been reached that, while there is a distinct correlation between other glands, notably the thymus, the adrenals, the parathyroids and the sex glands, the thyroid has an incretion or incretions which may act more or less independently

of the incretions of the other ductless glands.

Painstaking labors were needed to show the actual relation of the thyroid to the nervous system, to the circulation and to metabolism. Kocher's immortal discovery that thyroid gland tissue can be transplanted and function, at least for some time, has given the laboratory a tremendous impetus, which undoubtedly is indirectly if not directly responsible for certain ingenious experiments.

Baumann's discovery that the thyroid substance contains iodine (1895) apparently complicated the goiter problem somewhat, but in reality this biochemic addition to our knowledge had a clarifying influence which, to a certain extent at least, influenced goiter therapy also. The discovery of thyroxin (1914), by Kendall, meant a step forward; though comparison of the structural formula of thyroxin with that of 3-5-diiodothyramin shows a great similarity between the two, the latter being a preparation directly traceable to Baumann's discovery.

Perhaps the most important physiologic experiment that has been made up to now is that of Gudernatsch (1912) who struck the happy idea of feeding thyroid substance to tadpoles. Briefly, this investigator utilized the natural larval state of the frog to test the efficacy of thyroid on the metamorphosis of this amphibian animal. It was noted that when small doses of thyroid were fed, the metamorphosis was hastened; that is, there was a hastening of the development of the legs and of the retrogression of the gills, with correspondingly rapid development of the lungs and intestinal tube. If these animals were given larger doses of thyroid the metamorphosis was so fast that the gills retrogressed before the lungs had time to develop and they perished.

The far-reaching effect of these experiments, all of which have been carefully controlled, will become apparent when we learn that the reverse experiments have been successfully tried by W. Schultze, Abelin, Romeis, Tanberg and others; that is, by destroying the thyroid of tadpoles, development was inhibited while growth was increased. Feeding with thyroid substance the larvae deprived of their thyroids produced development.

These experiments are of utmost importance to show the influence of the thyroid gland on the general animal organism, and

when compared with our observations in man they become incontrovertible evidence.

The method itself is so convincing that it naturally aroused at least one surgeon—Holst—to try to demonstrate by it that the adenomatous tumors in goiter actually contain the toxic material which produces the phenomena of toxic goiter. The same kind of experiments were, furthermore, successfully utilized to demonstrate the toxicity of the discharges found in the wounds of patients who had undergone operations for goiter.

Etiology

The etiology of any disease is of utmost importance to rational therapy, because rational therapy and casual therapy are virtually synonymous. But, in spite of nearly half a century of study, we have no certain knowledge as regards the actual cause of goiter. True, certain sources of drinking water, certain soils, nutrition and infection, heredity and nervous disturbances have been mentioned and investigated, but the problems involved remain unsolved.

In this particular regard certain experiments seem to point with more or less certainty to the conclusion that, in all probability, no one factor alone is directly responsible for the development of goiter. Rats kept in northern, goiter-free countries have been given water from wells in a country notorious for endemic goiter, which have been regarded for a long time as sure goiter producers, without any ill effect; but when these rats were transferred to the goiter country the identical experiment resulted in the development of goiter. The reverse situation prevailed when rats were transferred from goiter country to goiter free cities. We must further ask why it is that goiter countries, in the course of time, become goiter-free, and vice versa.

All this science is still making serious efforts to answer. The discovery of iodine in the thyroid substance and incretions has proved of some help, but beyond that we are still at sea. Finally, while the causes of goiter have been sought in outside sources, we are not even certain that this affection is not a secondary and partial expression of a systemic disturbance, or even produced by other correlated glands. The influence of menstruation, pregnancy and lactation on the thyroid is undeniable, but the manner in which this influence takes place is still a mystery.

But this much is certain, that menstrua-

tion, pregnancy and mammary functions being purely physiologic, it will not do to blame women for playing their role or for not playing their role as mothers, since outside these functions there must be an additional something that brings about thyroid disorder. As regards the etiology, we have no scientific basis to work on and we must look for the indications for scientific therapy elsewhere.

The Thyroid Problem

The thyroid gland itself is the organ on which to focus our attention for clues to rational therapy.

Unfortunately, the goiter problem is still a confusing one, especially to the general practitioner or even general surgeon who has not had the opportunity to study an abundant clinical material. The voluminous literature is replete with theories and hypotheses of a varying character, so that the student is swayed hither and thither and at last realizes that there is a great need for something concrete, something definite to lean on.

Even in our present state of knowledge all this confusion can be averted, at least for the purpose of establishing the indications for medical and surgical therapy, if we ignore the complicated classifications of goiter and learn to arrange our entire known material in a biologic sense.

We cite here, merely for purpose of comparison, the anatomic classification proposed by Wegelin, which is superior to all others, in that it is exhaustive:

1.—Diffuse goiter

- a.—Diffuse parenchymatous goiter (congenital, of adolescence and of adults)
- b.—Diffuse colloid goiter
- c.—Exophthalmic goiter

2.—Nodose goiter

- a.—Nodose parenchymatous goiter (trabecular, tubular, microfollicular)
- b.—Nodose colloid goiter (simple or papilliferous, macrofollicular)

3.—Combinations of diffuse and nodose goiter.

Plummer claims to have given us the simplest imaginable classification, namely:

- 1.—Colloid or Simple Goiter
- 2.—Adenoma with Hyperthyroidism
- 3.—Adenoma without Hyperthyroidism
- 4.—Exophthalmic Goiter.

Plummer's classification is no less complicated than Wegelin's seems to appear at first blush, with the disadvantage of being unsatisfactory anatomically. Besides, the

grouping of exophthalmic goiter as a separate entity, at least anatomically, has little to recommend it.

What, then, is the best classification?

The answer to this may appear too radical for adoption, but we shall try to justify it from the clinical standpoint. We propose:

- 1.—Latent goiter,
- 2.—Toxic goiter.

From a purely anatomic standpoint such a classification is entirely unsatisfactory, but let us frankly confess that even the most skilled can not possibly make exact anatomic diagnoses, in all instances, before operation and not always even during operation, for it requires microscopic examination to determine the character of the lesions operated upon.

Indeed, the very diagnosis of goiter is fraught with difficulties. There are a number of growths which simulate goiter; thyroiditis has been mistaken for goiter; and the thyroid is as subject to malignant disease as are other glands. To complicate matters, serious thyroid disturbances may undermine the patient's health and even threaten life itself without there being a palpably enlarged thyroid gland; and goiters may exist in abnormal situations, presenting diagnostic difficulties of a separate character.

To justify our clinical classification it is necessary briefly to review the functional aspect of the thyroid gland.

We have already alluded to the phenomena produced by the absence of thyroid tissue, a condition which we shall term athyreosis. Hyperthyroidism, or hyperthyreosis, represents the other extreme. The phenomena produced by the normal and abnormal thyroid are shown in the following chart:

ATHYREOSIS AND HYPOTHYREOSIS	PHYSIOLOGIC THYREOSIS	HYPERTHYREOSIS
Low Metabolic Rate.....	Control of Oxygen Consumption.....	High Metabolic Rate
Increase of Body weight.....	Influences Growth.....	Loss of Body Weight
Mental Depression.....	Relation	Mental Excitement
Slowness of Achilles Reflex.....	to	Tremors, Nervous Irritability, Exophthalmos
Brachycardia	Sympathetic	Tachycardia
Dryness of Skin.....	and	Skin Flushed. Paresthesias
Lowered Body Temperature.....	Parasympathetic Systems	Increased Body Temperature
Amenorrhea	Influence on Heat Production.....	Menorrhagia
Asthenia	Relation to Sex Glands.....	
	Normal Health.....	Asthenia

This table does not represent the entire symptomatology of goiter, in all grades and shadings, for much depends on the amount

of toxins forced into the general circulation, on the defensive forces of the body and other factors, so that the clinician may see unmistakable goiter without symptoms; with very mild symptoms; and with extremely severe symptoms.

In justification for classifying exophthalmic goiter or Basedow's disease, as an expression of toxic goiter, we need but point out that the exophthalmos, together with other symptoms which are spoken of as typical of the syndrome, is purely an expression of the toxic effect of the goiter, resulting in contraction of the protrusor bulbi muscle.

We see, therefore, a picture of irritability of the sympathetic system, manifesting itself in a variety of vasomotor and secretory disturbances, and it is idle speculation for the clinician to attempt to penetrate the mystery of whether the nervous system affects the thyroid function, the thyroid affects the nervous system, or whether there exists a mutual interrelation resulting in a vicious circle, for we have, at present, no means of solving the problem in a satisfactory manner.

What we do know, however, from clinical experience, amply supported by the results of artificial or pathologic athyreosis, is that the toxins have a camp of concentration in the thyroid gland substance and that diminution of this substance also lessens or even removes all undesirable phenomena.

To this must be added a fact that should never be overlooked in estimating a case; namely, that often the thymus is as responsible for goiter trouble as is the goiter itself, and that removal of the thymus may be positively indicated.

The clinician must make sure that the

symptoms present are actually due to goiter, because there is no dearth of cases on record in which patients with tremor,

tachycardia, sweating and exophthalmos have been operated upon without benefit. These were cases that should have been referred to a competent neurologist for treatment.

It can be accepted as an axiom that there never exists a toxic goiter with a normal metabolic rate and, therefore, that such a diagnosis, without an increased metabolic rate, is fallacious. Nor must the clinician be satisfied without at least three tests, made at different times, for often a high rate of metabolism, shown by one examination, conveys a false impression of the degree of toxicity and we are apt to refuse operation, when the patient could be operated upon with comparative safety. It must never be forgotten that the test is interfered with unless the patients can be made to relax completely.

Finally, we confront a purely mechanical problem. A large goiter, compressing the trachea, is a serious affair requiring early surgical relief; but, often, comparatively small, intrathoracic goiters obstruct the chest aperture, resulting in stasis of the deeper veins of the neck, which in turn produces increased resistance in the lesser circulation and overburdening of the right heart. In such cases we have a purely mechanical heart disturbance, as distinguished from that due to toxic irritation.

The Surgical Aspect of Goiter

It must be clear from what has been said that the non-toxic goiters belong to the domain of the internist or endocrinologist except when they interfere with respiration and circulation. But even in toxic goiter, cooperation with the internist is of importance because the responsibility for the establishment of an operative indication had best be divided, except possibly when a surgeon is specializing to a greater or lesser extent in goiter work and has at his disposal all the laboratory facilities required for making a correct diagnosis.

Once the indication for operative therapy has been established, it is the surgeon who must decide what particular operation should be done. It must, however, not be forgotten that in spite of the small mortality at the hands of specially skilled surgeons, every thyroid operation represents a serious risk and every known measure should be taken to reduce the mortality to the minimum.

Fortunately, toxic goiter differs from, let us say, acute appendicitis in that, in the

latter, every moment lost means an increase of the operative risk; while in severe toxic goiter the best plan is first to obtain a favorable condition for the operation. Rest in bed and other measures, notably the administration of Lugol's solution in small doses, will accomplish wonders in most instances. The metabolic rate dictates the proper time for operation.

Choice of Operation

Of the operative methods, we can reject without further comment cutting of the sympathetic and resection of the superior and middle ganglia as being unsatisfactory, even though some operators have reported favorable results.

Lobectomy, that is to say the removal of the principally diseased lobe only, leaving the isthmus and the other lobe, is equally unsatisfactory because insufficient for our purposes.

The two-stage operation; namely, a preliminary ligation of the arteries supplying the thyroid gland, to be followed later by partial resection of the gland substance, appears unsatisfactory because it subjects the patient to the inconvenience and expense of two operations when one should suffice. Either there is a direct indication for operative therapy, which means that toxic or pathologic tissue has to be removed, or, if this cannot be done on account of too great risk or because of some other contraindication, the proper operation should be merely postponed until the risk has been reduced to a sufficient degree or the cause for the contraindication removed. At any rate, if rest and iodine medication cannot accomplish the former, it seems preferable to add x-ray treatments of the thyroid. The usual objection to the use of x-rays is that tissue changes are produced which render partial thyroidectomy more hazardous or technically more difficult; but this has not been universally confirmed. In a recent case I found that the operation proved technically easier than has been my experience in similar cases. I believe that radiotherapy may yet eliminate thyroid surgery to a great extent, provided the proper dosage can be found and controlled.

Of late, some American and European, notably Norwegian, surgeons have advocated total thyroidectomy, on the ground that, in adults, there are no serious drawbacks from the operation and that thyroid feeding will overcome what undesirable re-

sults may follow. The reason for this radical procedure is that it absolutely removes the possibility of recurrences which, it is admitted, do occur after partial thyroidectomy.

In the light of what has been said about athyreosis, it appears inconceivable how any man can advocate such a measure. There is no doubt that, in adults, growth is not interfered with, because it has already attained its maximum. But growth alone is not the important thing; what we fear is cachexia strumipriva, and the unfortunate who become the victims of such overzealous surgery will be compelled to take thyroid substance for the rest of their lives, without the assurance that thyroid feeding will always prove effective.

After a review of our own limited material and that of other authors, involving perhaps several thousand cases, controlled by long periods of postoperative observation, it appears that there are only two procedures to follow in toxic goiter: one is the enucleation of strictly circumscribed adenomas or cysts, provided the remaining tissue is absolutely normal; and the other is partial resection of the gland, leaving sufficient tissue to prevent athyreosis.

It is better to err on the side of conservatism and remove too little, than to be too radical and leave not enough for thyroid function. Is it not better to produce only a partial cure and continue with a limited course of medical after-treatment, than to risk permanent harm?

It is not within the scope of our inquiry to discuss operative technics, but the question often must arise as to who is competent to perform thyroid surgery. The answer can be dismissed with one word: *he who knows how*. It must not be forgotten that what may, at first, appear a simple case, requiring merely average skill for the performance of a simple operation, may turn out to be a very difficult task, taxing the skill and resourcefulness of even the best-trained operator.

Difficulties and Dangers

Only the surgeon who has unexpectedly encountered a retrosternal goiter can appreciate the difficulties of goiter surgery, and not infrequently hemorrhage may be so profuse as to unnerve even the most enthusiastic wielder of the scalpel.

Finally, sudden collapse or bending of the trachea may necessitate life-saving measures which must be brought into play in a very few seconds.

The question of *anesthesia* is an important one. Because of the danger of injuring the recurrent nerve, local infiltration analgesia is the method of choice, since we can keep up a conversation with the patient while he or she is undergoing the ordeal; but often enough we must sacrifice this measure in order to afford the sufferer the benefit of general anesthesia. When patients are so nervous that neither a preliminary dose of morphine nor the most skillfully performed local analgesia can keep them quiet during so delicate an operation, then ether must be resorted to, whether we like it or not. Of course the best obtainable anesthetist is none too good.

Another serious danger must be borne in mind, and that is the accidental removal of or serious injury to the parathyroid glands. Here, only the most intimate familiarity with anatomy and the utmost skill in dissecting can save the surgeon from the catastrophe of being called up a few hours after the operation, to be told by an inexperienced interne that the patient has suddenly developed lockjaw. Certainly the spasms are severe enough to frighten any interne into such a diagnosis; when, of course, the correct diagnosis is tetany.

In conclusion I must mention that terrifying postoperative reaction, often falsely termed a crisis. It is serious collapse, threatening life and often destroying the patient in an incredibly short time, and is due as much to the liberated toxins being forced into the circulation by improper technics as to any of the usual causes responsible for postoperative shock. The experienced surgeon will know how to guard against it, by proper operating and by adequate drainage; but, after all, the best method of prevention is to operate at the proper time.

Goiter surgery, at our present state of knowledge, represents a grateful field of scientific endeavor; but he who desires to earn the gratification to be reaped from work well done must qualify as a trustworthy priest before entering the sacred temple of operative surgery.

198 N. State St.

Fibroplastic Sarcoma in a Goldfish

(A Case Report)

By A. G. DOMINGUEZ, M.D., Havana, Cuba

Radiologist of the Hospital Centro Balear, Dr. Ledon's Clinic and "La Milagrosa";
Ex-Radiologist of the Cuban Navy; and to Dr. Ernest Font,
Pathologist of Mercedes Hospital,

FOR some years I have gone in for the sport of breeding colored fish, specializing in the Japanese varieties with large tails; they are kept in a tank approximately a meter and a half wide by two and a half in length and 50 centimeters deep, with an average of 40 fish at one time, being fed exclusively with bread crumbs, kept in ordinary water, and the fish-tank being exposed to the direct action of the rays of the sun.

For nearly three years, one of these fishes, some 25 centimeters in length, showed, on its dorsal fin, a tumor the size of a small pea, which absolutely did not affect its movements, nor apparently, in any other way, its normal life.

I particularly observed this tumor during a year and a half, until it grew approximately to the thickness of 1.5 centimeters; during the last three months it was noticed that the tumor had developed a whitish color and was covered with a layer which, on being removed, came off in the shape of light filaments.

Believing that the life of this fish was in danger, I decided to take it to the Hospital and place it in Dr. Font's hands for an experiment, by placing a small seed of radium on the tumor; but due to the necessary handling, the fish died two days after it had been in the hospital.

When I took the fish from the tank, the presence of secondary small tumors on the tail was observed. These were not there when the tumor developed on the dorsal fin, and I therefore consider these secondary tumors of the tail as metastases from the initial lesion.

I judged that we had to deal with a malignant tumor of the fish, with the evident metastases on the tail. Of 24 fishes removed from the tank where the one with the tumor had been kept, I observed another which presented a tumor on its tail,

nearly the size of a pea, dark red in color on one of its sides, the rest of the mass showing the same characters as that of the fish previously described. The present tumor on this second fish, which, by the way, had been in contact with the first one, is now about 8 months old.

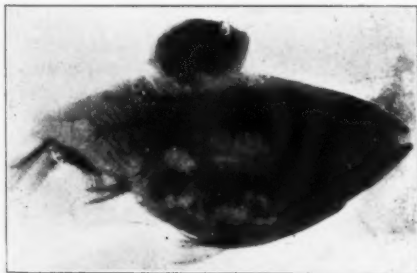
At present I am keeping this fish for observation, awaiting the development of the tumor for a later description of the case. Dr. Ernest Font, pathologist of the Mercedes Hospital, will give a report of the microscopic examination of the tumor on the first fish, which seems to have been of a malignant nature.

Having learned of Dr. Font's findings, I desired to continue the investigation of these interesting cases of cancer in the fish. The second fish was taken out of the tank where it had contracted the tumor and, assisted by Dr. Font, I placed two emanations of radium upon it, approximately one half millicurie. This fish lived, apparently normal, during a period of 5 months, until the middle of November, when it died in the tank.

Upon examination it was found that the tumor had completely disappeared, leaving in its place only a small hole, which was certainly produced by the consecutive burning by the application of the radium seeds.

The tumor had completely disappeared, and on performing the autopsy on the fish, no lesion at all could be found or signs of metastases in the interior of the organs.

A more curious observation than the above is the following: On the day that we put the radium seeds on the second fish, we observed that one of my police dogs, 9 months old, who had never left my home, but who drank from the fountains in which I kept the colored fish, developed a sloughing wound which covered all the left part of the lower jaw, emitting a very foul odor. Upon investigation by the



Roentgenogram of Sarcomatous Fish

Veterinarian, Dr. Meana, and also microscopically by Dr. Ernest Font, it was proved that the dog had cancer of the left part of the lower jaw. Their report induced me to sacrifice the dog, which could not continue to remain in my home in that condition.

I wish to publish this observation for the interest that it presents; certainly more than the two cases of tumor in the fish; particularly in regard to the evident coincidence in the development of the malignant wound in the dog, which was accustomed to drink, the same as my other dogs, from the two fountains in which I keep the colored fish.

It is well known that fishes suffer from cancer and there have been numerous cases described by Wago, Chamberg, Yoshiaky and others; but in my opinion, the presence of the tumor in the dog, which cannot be explained except by a probable contamination with the water from the tank, is of particular interest from an epidemiologic point of view.

Macroscopic Aspect

The fish presented an oval tumor, of a yellowish-pink color, located on the dorsal fin and soft as brain substance. (Fig. 1). A transverse section of this tumor showed the presence of hemorrhagic spots.

Upon the abdomen we found several metastases of the same aspect as that of the original tumor, located in the right brachial hepato-pancreas, and the natorial vesicle.

Microscopic Examination

This tumor is formed by very long, fusiform cells, with central ovular nuclei, very chromatic.

The interstitial spaces are occupied by connective tissue and elastic fibers.

The tumor is very vascular, the walls being formed by the same cells as the body of the tumor.

In some parts of the tumor we observe that the blood runs as freely as water could through sand.

Histologic diagnosis: Fibro-plastic sarcoma, with multiple metastases.

Paseo Marti, 33.

The Treatment of Eczema

By FRANK EDWARD SIMPSON, M.D.

Adjunct Clinical Prof. of Dermatology, Northwestern University Medical School.

and ROY EMMERT FLESHER, M.D., Chicago

WHAT is "eczema"? This is much disputed by dermatologists. Experts have no difficulty, however, in agreeing on a "clinical picture" they call "eczema."

While a complete clinical description of eczema would be beyond the scope of this paper, few would deny that common, acute eczema is an inflammatory skin affection, characterized by a more or less continuous gummy discharge from the affected parts and attended by severe itching and burning. As this discharge from the skin ceases, crusting and scaling are in evidence.

The Cause

If the cause of an eczema can be found, some would at once deny that it is an "eczema" and would call it "dermatitis." This may be correct, but the fact remains that the clinical picture is often the same. In other words, eczema and dermatitis are often indistinguishable, clinically. The treatment, fortunately, is the same.

When confronted, then, by the clinical picture we call eczema or dermatitis, we shall be fortunate if we can discover the cause. The list of irritants that may cause a dermatitis is a long one. Certain plants, chemicals, sunlight, heat, cold, soap and water, etc., combined in various ways may cause dermatitis.

We once knew a celebrated surgeon who suffered for years from so-called eczema of his hands. Distinguished dermatologists prescribed, but with only temporary benefit, until he himself discovered that he was very sensitive to formaldehyde, used in his surgical practice. When the cause was removed, the eczema disappeared.

The first rule, then, in prescribing for eczema is to go through the patient's daily routine of life and find, if one can, the cause. If found, it should be removed, if possible. We are dealing, then, not with "eczema," but with "dermatitis," which will

usually recover, either spontaneously or under almost any kind of soothing treatment, if the cause can be removed.

Suppose we cannot find the exact cause and we are left with our diagnosis of eczema?

The first thing to do is to put the patient's skin, so far as possible, at rest. In other words, remove, so far as is feasible, all external irritants. Forbid the patient going out in the sun, the wind, the cold, the heat, etc.; forbid exposure to the cook stove, the use of soap and water, and other potential irritants; forbid things that flush the skin—exercise, alcohol, and hot drinks. Sometimes rest in bed is essential.

Diet

Almost everyone appears to believe that dieting of some sort is essential in eczema, but the exact diet is by no means agreed upon. If the patient is corpulent his food may be lessened, and if he is thin we may try to increase his weight to normal. If the patient has no vicious dietary habits, such as the "candy habit", we question the necessity of trying to diet him for his eczema.

In eczema in infants, the pediatrician should be consulted and a rational formula agreed upon. The general condition of the patient should be investigated.

Medicines

Many authors advise internal medication in eczema. One of the favorite remedies is arsenic in some form. We must confess that we have never been able to see marked good effects from internal medication in eczema. A placebo may be advisable, however, in some cases.

Local applications: We have already said that soap and water should be forbidden. One good washing of the parts with soap and water will often undo a week's careful treatment.

For cleansing the skin, almost any non-irritating, oily substance will do. Olive oil, sweet almond oil, mineral oil, etc. seem to answer the purpose. Cleansing once a day may suffice. It may be advisable to saturate the parts with pieces of linen soaked in oil. The crusts and scales are thus washed off and repair of the skin is facilitated.

Antipruritics: Beware of antipruritics! Many writers give a long list of remedies for relieving the itching of eczema. Unfortunately, remedies that will sometimes

relieve itching in the uninflamed or merely traumatized skin, usually irritate the inflamed, eczematous skin. We, therefore, strongly advise against antipruritics in most cases of eczema. Beware particularly of bichloride of mercury, carbolic acid, tar, resorcin and menthol.

What to Prescribe

From a long list of hundreds of "favorite prescriptions" for eczema, we may suggest two that we often prescribe ourselves. These medicines should be applied with the finger—not with cotton or cloth. Do not rub the medicine in and do not bind up an acute eczema.

Lotion

	Grams
Zinci oxidi	10
Zinci carb. praecipitat.....	10
Glycerini	3
Aq. calcis q. s.....	128
A prescription of the above order is especially valuable in "weeping" eczema.	

Liniment

	Grams
Zinci oxidi	5
Zinci carb. praecipitat.....	5
Adipis lanæ anhyd.....	12
Ol. Olivæ	60
Aq. calcis	60
A prescription of this kind is useful in the drier types of eczema.	

When progress to recovery slackens and an eczema seems to demand more grease, a salve may be used.

	Grams
Zinci oxidi	4
Pulv. Amyli.....	4
Adipis Lanæ anhyd.....	16
Petrolati	16

In certain cases that require more active treatment, salicylic acid, in the proportion of one percent, may be added cautiously to the above ointment. Other cases may require two percent salicylic acid, but it should never be stronger, unless one has had special experience with lesions in different situations.

The dean of American dermatologists, George Henry Fox, of New York, once said that physicians should be prevented by law from prescribing anything but zinc oxide ointment in infantile eczema.

The many different forms of eczema and its many different locations make it a protean disease. The underlying principle in the treatment of all acute types, however, is to protect the skin from all irritation and use only the most soothing remedies. Nature will then heal the skin.

In more stationary or chronic types of eczema, which fail to get well under soothing treatment, we sometimes paint small areas of the eczematous skin with a solution known as Cutler's lotion. The areas may be painted by the physician once a week or less often. In the intervals between applications, the patient should use cooling lotions or salves such as have been suggested.

Cutler's Lotion

Grams

Tr. Iodi
Phenol liquefacti
Chloral. hydrati aa10
A very small quantity of the above lotion may be applied by means of a cotton applicator.

The lotion should never be used when there are cracks or fissures in the skin and, indeed, only when one has found, by some experience, its indications. If the application causes pain, it should at once be washed off with alcohol and a soothing lotion applied.

In general, in chronic, small, thickened

patches of eczema that have remained stationary for weeks or months, it may be cautiously tried on a small area. Correctly used, it is an excellent application for indolent patches of chronic eczema, that sometimes deserve the name of "lichenification" of the skin. It should never be given to patients for home use.

Physical Therapy

We sometimes cautiously use very weak applications of radium in sluggish types of eczema. A square plaque measuring 4x4 cm. and containing 20 mg. of metallic radium may be applied, unscreened, to eczematous patches for 1 minute, for 3 applications, on successive or alternate days. Later, the plaque may be screened with 1/10 mm. of lead and 3 similar exposures, of 2 minutes each, may be given. Nothing approaching a tanning or an inflammation of the skin should ever be produced by the radium. We have thought that these applications relieve the itching and aid in bringing about recovery.

59 E. Madison St.

Foods in Relation to Normal Function of the Colon*

By G. M. RUSSELL, M.D., Billings, Mont.

A LARGE percentage of digestive irregularities and pathologic states, and secondarily many acute and chronic affections of other portions of the human organism are directly traceable to the kind of food that is generally being used.

A. S. Thomson¹ states that the kidneys excrete the end-products of metabolism, in combination with eight or ten of the elements: sulphur, calcium, phosphorus, chlorine, potassium, sodium, etc.; but if these elements are not present in the economy in sufficient abundance, defective elimination follows, with retention of deleterious waste products in the system—autotoxemia, with all that that entails.

Natural foods contain all these necessary elements in abundance; but the food that forms most of our dietary is so sophisticated, polished, refined, adulterated, processed, demineralized, denatured, etc., that the greater portion of it is no longer fit for food. To please the eye and tickle the

palate of consumers, good wholesome and nourishing foods, fit to raise the finest crop of human beings, physically, mentally and morally, is so processed as to become worthless as food, and ends by being a potent agent in destroying the national health. In addition to demineralization, the coarser food elements are also removed—elements that are absolutely requisite for normal bowel action.

I again quote from Thomson:¹

"During the late War, the German commerce raider, 'Kronprinz Wilhelm', was out for 255 days. Her crew of 500 men had ample stores of chilled fresh beef and mutton, refined white sugar, white flour, ham, cheese, condensed milk, potatoes, butter (oleomargarine), canned vegetables, polished rice, tea, and coffee; in fact full supplies of all the foods that are to be found in any average American household in comfortable circumstances.

"On March 25, 1915 (238 days out), fifty of her crew were acting 'queerly,' and none of the others were in first class health, with fresh cases developing so rapidly that in a few weeks all of them would either be dead or on the sick list, unfit for duty.

*Read before the Yellowstone Valley Medical Society, Oct. 14, 1927.

So, taking a desperate chance against the enemy, a dash was made for Newport News, where they arrived on April 11, 1915 (255 days out), with 110 men in the hospital and the rest of her crew all heading the same way.

A dietitian of large experience at once declared that the sickness of the crew was due to a deficiency in diet and pointed the way to curative treatment. The ship's surgeon sent for the ship's cook, and a new dietary, embodying the suggestions made, was devised. This proved so effective that only 10 new cases were reported up to April 15 and, after that date, the sick recovered so rapidly and completely that, by the 24th of April, or ten days after the new dietary was adopted, 47 men were dismissed from the hospital cured, and the rest were all rapidly recovering, without drugs of any kind being administered.

"Lt. Col. McCarrison, of the Indian Army Medical Service, spent nine years among the wild Himalayan tribes. He did an average of 400 major operations yearly, and never saw a case of gastrointestinal illness other than an occasional infection with the round worm; yet these people, living upon the unsophisticated foods of nature—milk, eggs, grains, fruits and vegetables—are, he tells us, of magnificent physique, preserving until late in life the characteristics of the young; they are unusually fertile long lived and endowed with nervous systems of notable stability; they eat goats flesh on feast days only.

"McCollum in the 'Newer Knowledge of Nutrition' is exceedingly insistent upon the inclusion of milk and green leafy vegetables in the normal dietary, and McCarrison is equally so; but he is just as insistent upon the inclusion of entire grains, in which stand his experience with large numbers of army men and with the wild tribes of Himalayan India afford every justification.

"When we consider how the Balkan peoples, situated about two degrees north of the latitude of Pennsylvania, have lived for ages upon whole-rye bread and sour milk; that they are the largest race, physically, and the longest lived of all races of people keeping vital statistics; that the next largest race, the Highland Scotch, have lived, from time immemorial, upon oatmeal and milk (not, however, the refined oatmeal of our time), we begin to believe that McCarrison must be right, especially when to this evidence we add the remarkable physical development, longevity, fertility and absolute absence of gastrointestinal illness among the wild tribes of Northern India."

Bulk in the Colon

The one most important factor in causing peristalsis and proper action of the colon is distention. MacMillan¹ states that the important feature is the quantity, not the quality, of the colonic contents. If the reverse were true, a small quantity of feces

would stimulate peristalsis as effectually as would a large amount. His investigations show that, in health, under physiologic conditions, the chemical character of the feces is of no importance. He experimented by inflating rubber bags in the colon, whereupon contractions immediately occurred above the bag. The contractions produced by chemical irritants resembled a spasm. These experiments seem to prove that distention alone, without the addition of any chemical or thermal stimulation, is sufficient to produce normal peristalsis.

A study of the literature confirms the conclusion that distention is a most important agent in producing contractions in the alimentary canal. Distention by food and waste material is a necessary factor in the maintenance of a healthy condition in the muscles of the alimentary canal, because the extensive stretching and contracting of these muscles keep them well developed.

Alvarez² states that most of the motor activities of the stomach and bowel are brought about and regulated by the internal pressure due to the presence of food or gas. Cannon has shown that the rhythmic segmentation in the small intestine is due simply to the fact that those muscle fibers which are stretched tend to contract. Their contraction increases the pressure in neighboring segments, and so the process goes on. Alvarez states that he has considerable evidence to show that the reason one's bowels, after having been purged, have a tendency not to move for a few days, is due simply to the lack of tension in the colon. As Cannon points out, these reactions to stretching are purely local, and are not brought about by nervous reflexes.

Von Noorden³ states that during the time, and particularly immediately preceding the development of mucous colitis, he finds that, almost without exception, the patient suffered for some weeks or months with obstinate constipation. All his cases have this in common, that the patients, for one reason or another, lived on the simple, so-called light diets, such as are prescribed for gastric ulcer, for a long time.

He recommends in the treatment of colitis a diet consisting of bread containing a large proportion of husks, and as great a variety as possible of leguminous plants, including the husks; vegetables containing much cellulose; fruits with small seeds and thick skins; besides large quantities of fats. On this diet, the reflex secre-

tion of mucus ceased very soon. The cellulose of the bread, etc., undergoes bacterial decomposition, gas is developed slowly, and the decomposition proceeds so gradually that the binding together of feces into hard lumps is prevented.

In spastic constipation, however—and nearly all cases of colica mucosa belong in this category—a diet leaving little residue must be considered difficult to digest, for such a diet furnishes feces of a character that must be considered unsuitable and injurious in this disease. As soon as the sluggishness of the bowels is removed and the action is normal, in that they become regulated by the ingested food alone, the disease may be considered cured.

Von Noorden pushed the intake of pure fat to 200 to 250 Grams per day, and states that the fact that he was able to administer such large quantities of food, and in particular such large quantities of fat, without producing any appreciable disturbance—a few cases excepted—demonstrates better than any theoretical arguments that colica mucosa has nothing whatever to do with a truly anatomic, inflammatory disease of the intestine.

It seems that if spastic constipation is nothing more or less than a sequence of atonic constipation, and this latter is caused by the lack of the proper amount of food containing roughage and cellulose, the logical diet for both atonic and spastic constipation should be that containing the elements which originally would have prevented its occurrence.

I. H. Moore⁶ states that 60 percent of the diseases which have for ages been a mystery, and the cause undiscovered, are due to poisons generated in the colon and that the colons of civilized races are poor, unfortunate cripples, out of shape, contracted or dilated, stretched, infected, inefficient, twisted, kinked, incompetent and paralyzed—the most abused organ in the body. This condition is largely preventable.

In my personal experience I have seen cases that had been diagnosed as gastric ulcer, neurasthenia, chronic appendicitis, periodic migraine, lumbago, sciatica and a number of other conditions, in which the symptoms and complaints entirely cleared up and disappeared upon correcting the underlying constipation by placing them on a coarse diet, with the application of massage, electricity, vibration and the proper use of enemas, and there has been no recurrence so long as they remained on the

diet prescribed and were periodically relieved of any possible accumulation by an enema.

Residual Constipation

In some of these cases the bowel action was apparently regular, the patient having a daily movement and sometimes two; and yet they were found to be constipated, the carmine test, as well as fluoroscopy following the administration of barium, revealing the fact that material remained in the colon from two to four or five days. As Hemmeter places 26 hours as the longest period during which remnants of food should remain within the digestive tract, the only interpretation that can be made is latent constipation; and when, added to these findings, the result of treatment of the diagnosed constipation results in perfect recovery, there can be but one conclusion, and that is that the constipation was the cause of the disability.

Ardent zeal is displayed in demonstrating the source of toxemia in the tonsils, teeth, gall-bladder and appendix. The colon, presenting an incalculably larger area for absorption of toxins, has been practically ignored. Lane, a number of years ago, brought it into prominence by way of the "Lane kink" and his short-circuiting operation and removal of the colon.

Lane⁶ claims to have cured pyorrhea, tuberculosis, arthritis deformans, nephritis, cystitis, pyelitis, endometritis, salpingitis, exophthalmic goitre, skin diseases, colitis, endocarditis, epilepsy, neurasthenia and a host of other diseases by this operation. It is surprising that, with such results, this operation should not have become the most frequent resort in surgery, at least sharing honors with the ubiquitous appendectomy. The apparent reason for this partiality is the greater ease of picking on the smaller fellow. To-day the colon receives practically no recognition, surgical or otherwise, except when the possible involvement with neoplasms, tuberculosis or constrictions is considered, or attention is enforced by the information by the patient that he is passing large quantities of mucus.

When a patient comes complaining of pain, tenderness or ill feeling in the right side of the abdomen, the first sources thought of are the gall-bladder and appendix; and if the patient is sufficiently brave to undergo their removal, and the pain or ill feeling persists, the case is either given up in despair or resort is had to the convenient explanation of adhesions, in which

case the patient is no better off in his sensations, and worse off in pocket, and, unfortunately for him, he is not in a position to check up on the pathologic findings in the appendix and gall-bladder.

If the people of this country had been living on the natural foods, according to McCarrison's account, there would have been no occasion for appendectomies, gastroenterostomies or cholecystectomies, and the surgical percentage would have been considerably reduced.

In this connection it is interesting to quote the statement of R. C. Brown⁷ that the term chronic appendicitis, as commonly used, might well be practically eliminated from the terminology of clinical medicine; that unnumbered surgical errors have been committed as the result of attempts to account for improperly diagnosed abdominal conditions by assuming the presence of chronic inflammation in the appendix as the basis of existing symptoms.

How Important is the Colon?

Metchnikoff, many years ago, stated that if a man had no colon he could exist for 300 years. Since this organ can successfully be removed, those who have had it extirpated should, according to his theory be able to live out that expectancy on peptonoids, malted milk and starch, and perhaps arrive at the point of subsisting upon a meal encompassed within a capsule.

Much time has been spent, by several investigators, in endeavoring to establish a connection between malabsorption and metabolic diseases. Conclusions have been arrived at that the proximal colon is an essential organ for the proper formation of the feces, and that the time for the passage of the fecal mass should be between 62 and 134 hours. Statements have been made that skin diseases, rickets and scurvy clear up when the colon is properly functioning, in correctly forming the feces and allowing adequate absorption time by a regular schedule of their progress through the colon. According to these conclusions, those who have had the colon extirpated should be most liable to those afflictions; and it is impossible to reconcile the claims of Lane, that he has cured skin diseases by removal of the colon, and those of these other investigators, that they have relieved patients of eczema and psoriasis by causing a proper functioning of the colon. If their conclusions are true, those patients suffering from chronic diarrhea

should have scurvy and skin diseases, and no child with rickets should have constipation, which is the earliest symptom of that disease.

The hectic ambition to compensate for the deficiencies in foods, by ultraviolet radiation of the foods and of the subjects, displays an ingenious ability to repair artificially the damage done by meddlesome interference and modification of those foods.

Propositions have been made for changing the flora of the contents of the colon, in an effort to render it less septic and toxic, which plan is quite on a par with that of injecting antiseptics into an abscess without evacuating its contents.

It is not necessary to assume that all cases such as those mentioned are caused by constipation, but, in addition to exhausting all the other diagnostic methods scientific medicine affords, it is very easy to determine whether constipation does exist, and it is a duty incumbent upon every physician to do so, and not take it for granted that the bowel is performing properly, on the statement of the patient that defecation is performed every day, when it is a fact that his food intake precludes the possibility of perfect action.

Foods are the only foundation for the continuance of our existence, and upon the constituents contained within those foods, and the resultant products of the actions of the digestive secretions on them, depends the degree of comfort and health which they are able to furnish. If they do not contain the correct properties and ingredients, they cannot maintain the human being in a perfect physical condition. It is surely of the utmost importance that this basis of vitality and energy should be given much more attention and study, so that proper directions may be given for the use of natural foods, and warning against the ingestion of those which have been rendered positively harmful by modification and by the removal of essentially necessary properties and constituents.

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Audible Speech Development After Complete Laryngectomy

(A Preliminary Report)

By JENNIE HEDRICK, Washington, D. C.

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IT is a well known fact that in cases of paralysis and hysteria there is no voice, because the vocal chords do not function. Obviously, then, when the vocal chords are extirpated and voice is developed, something unusual has happened. The object of this paper is to give a preliminary report of such a case.

The alarming symptom noticed by the patient was a hoarseness which would not yield to ordinary treatment. A throat specialist diagnosed the trouble as acute laryngitis and advised the patient to go to the mild climate of Arkansas, which he did. There the laryngologist decided that the larynx was diseased. The patient returned to the East and consulted Dr. Fielding O. Lewis, in Philadelphia, who pronounced the condition cancer.

Dr. Lewis sent me the following description of the operation which he performed:

"The operation consisted in total removal of the larynx, followed by sewing the tracheal stump to the skin of the neck and closing up the pharyngeal wound left after the larynx had been removed. Of course, you can readily see that he has no communication between his lungs and his mouth."

The patient inserted a tube into the aperture at the base of his neck and through this he filled and emptied his lungs, or, in common parlance, "breathed" to sustain life.

In order to give a clearer understanding of the case to those who are not familiar with the operation of complete laryngectomy, I wish to call attention to the statement that "no air could pass into the lungs through the nose or mouth." The passage between the buccal cavity and the lungs was completely closed. Air could enter through the nose and mouth, but that was no longer done involuntarily, as the suction caused by expelling breath from the lungs was lacking.

The emptying and filling of the lungs

had to become a secondary process. The prime factor was to develop the ability to inhale and exhale through the nose and mouth, independently of the lungs. The inhaled air was stored in a false pocket in the stomach or esophagus to be used as needed for speech.

The patient could whisper when I first saw him, but no sound was voiced or "vocalized." His articulations were very good, so his whispered words could be readily understood.

A few days after his first lesson his stenographer telephoned me that he wished me to know that he was making voiced sounds. At each lesson he mastered new sounds and combinations of sounds until he had all except the nasal sounds, which he has never acquired.

The strength of his voice has gradually increased. Now he can be understood over the telephone and by persons in the adjoining room. He was much elated when he could be understood when not seen. Then he was sure the sounds were audible and the hearer was not reading his lips. This was attained after twenty lessons.

His voice no longer embarrasses him nor attracts notice by its unnatural tones. It is monotonous, but I see no reason why it should not become flexible and in a degree musical.

A few words about the buccal voice may be appropriate at this time.

A prominent teacher of expression lists as the essentials of the human voice the diaphragm, the nose, the mouth and breath. If these are the essentials, then the outlook for the developing of a buccal voice is most promising. The diaphragm is still active and can be utilized to expel the stored air from the false pocket just as well as gas from the stomach, as in the case of belching.

Breathing through the nose is no longer normal. This activity must be acquired. My pupil insisted that he could not do it.

I urged him to try. To his surprise, after repeated efforts, he was able to make the nose function.

The mouth still gives character to the sounds, as is apparent from the individuality of the whispered sounds which the laryngectomized patients make.

Air or "breath" has to be inhaled in an artificial way and stored in a false pocket in the esophagus until needed for speech. A pseudo-glottis has to be developed.

The development of the pseudo-glottis is the critical factor. Our assurance that it can be done is based on the ability of man to belch. Dr. Twitmyer, of the University of Pennsylvania, called the buccal voice the belch-voice—an expressive name; certainly from my experience the ability to belch is necessary in order to develop it. A belch can be made by swallowing and expelling the gases from the stomach through the narrow aperture formed by

the contracted soft palate. By practice one can produce in this way a variety of sounds.

Where the pseudo-glottis is located is still an open question. From observation of this pupil I inferred that it was formed back of the soft palate and that the posterior pillars acted as vocal cords. Owing to the operation, all the muscles of the throat were weakened so the pillars became more flexible and could be approximated more closely.

A doctor who had treated 64 laryngectomized patients, in Vienna, told me that in only one case had he failed to develop the buccal voice.

In conclusion, I would advise all laryngectomized persons to have lessons from a speech specialist who has developed the buccal voice before trying any apparatus to assist them to speak audibly.

3321, N St. N.W.

Your Society

The well-conducted medical society should represent a clearing house, in which every physician of the district would receive his intellectual rating, and in which he could find out his professional assets and liabilities. We doctors do not "take stock" often enough, and are very apt to carry on our shelves stale, out-of-date goods. The society helps to keep a man "up to the times", and enables him to refurnish his mental shop with the latest wares. Rightly used, it may be a touchstone to which he can bring his experiences to the test and save him from falling into the rut of a few sequences. It keeps his mind open and receptive, and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine.—Osler, "Aequanimitas".

The Seminar

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 3

(See Clin. Med. and Surg., Feb., 1928, p. 117)

Recapitulation.—A married woman of 38 years; no children; no disorders of sex functions, gave a history of a painful axillary tumor which was surgically removed at the age of 23 years, after which she slowly and gradually lost weight, though she felt well. At 32 years, during a menstrual period, serous fluid gushed out of her right nipple, and there has been a leakage ever since, so that she has to wear a pad over the breast.

On examination she is found to be much under weight, but no physical signs or symptoms of disease are reported. Wassermann test, negative; red blood cells 3,400,000 with many poikilocytes; hemoglobin 65 percent; lymphocytes 39 percent; trace of albumin in the urine; secretion from breast shows a few staphylococci (from skin?) but no pus cells.

After 4 months' treatment with a variety of hygienic and physical measures, seven different glandular extracts and a number of drugs, including some from the eclectic and homeopathic schools of practice, the patient had gained 15 pounds in weight, felt much better and the blood picture was decidedly improved. The flow from the breast stopped for about two weeks, after which it reappeared slightly during menstruation.

Requirements.—(1) Probable etiology and diagnosis; (2) Comments on management; (3) Prognosis and future treatment.

Discussion by Dr. Jacob Jacobson, Chicago
Etiology.—Trauma, from a blow or constant squeezing.

Probable Diagnosis.—Chronic Lobar Mastitis.

I think this is the most plausible diagnosis, because she developed a painful axil-

lary tumor at the age of 23. This was probably secondary to the mastitis she must have had. True, Dr. de Stone said nothing of any breast symptoms at this time, but it may have been so slight as to have been overlooked or forgotten by the patient. After the removal of the mass she began to lose weight. This was undoubtedly due to worry. We all have patients who worry any number of pounds off, especially if they think they have cancer.

The condition in the breast became dormant, the inflamed area involving the acini and interstitial connective tissue hypertrophied and then, later, underwent cyst formation. The acini became filled with epithelial debris and serum and, finally, six years ago, during a menstrual period when the breasts were engorged, some serum appeared at the nipple. When she was assured that she could recover, medication and freedom from worry promptly improved her condition.

Management of the Case.—The surgeon who examined this patient fifteen years ago, and who removed the axillary tumor, should have made a careful examination of the breasts, when he would very likely have found a more or less large mass, probably deep in the breast. This he should have removed then. After removing the axillary gland he should have insisted upon frequent examinations and eased her mind as to the possibility of carcinoma occurring. I believe that all surgeons should pay as much attention to after-treatment as at any other time, because it is very important. One's responsibility does not stop when one puts the last stitch in the skin.

Prognosis.—The discharge may continue the same indefinitely or:

- 1.—General atrophy may occur, or
- 2.—General cystic condition of the breast.
- 3.—Cancer may develop, because of the continued irritation, especially in a patient with a cancer inheritance.

Treatment.—Remove the breast. There will be no discharge and no more worry about a malignant condition.

Discussion by Dr. Otto B. Pavlin, Chicago

In this case the breast seems to be the focus of symptoms, and in making a diagnosis we must consider extramammary and intramammary causes.

Of the *extramammary* causes, an *endocrine dysfunction*, most likely of the gonads, should be considered, as both glands enlarge during the menses. This is not so likely here, however, because there is secretion from one breast only.

Malignant disease of the ovary sometimes causes breast disturbances, but the improvement which took place here in 4 months is not likely in such cases.

Tuberculosis of the lungs, with secondary involvement of the breast, is possible. If this were the case, we would expect lung findings, and considering the duration of the disease, sinus formation. Temperature observations over a period of time would be helpful.

Before making a diagnosis of an intramammary condition it is necessary for us to answer the following questions:

- 1.—Are the breasts symmetrical?
- 2.—Is there skin dimpling or nipple retraction?
- 3.—Are masses present in one or both breasts?
- 4.—Is there any adenopathy?

Malignant disease should be considered first in all breast conditions. The acute types of cancer are ruled out by the duration and response to tonic treatment. Of the less malignant tumors, *scirrhous carcinoma* is not common at this age and would produce sclerosis and nipple retraction. *Duct cancer* is ruled out by the absence of a bloody discharge and the red, dusky swelling close to the nipple.

Benign tumors, of the cyst or adenoma type, or their combinations are not likely.

Chronic infection is indicated as an etiologic factor by the painful tumor 15 years before; the secondary anemia; and the loss of weight. *Tertiary syphilis* and *actinomycosis* of the breast are rare and do not fit into this picture.

The fact that this woman is nearing the menopause, the probability of an earlier infection, and a serous discharge from one breast suggests *chronic interstitial mastitis*. Although the discharge is usually scant in this disease, a rupture of one of the many cysts that are often found would account for the profuse discharge. Pain is not always present.

If my diagnosis is correct, the patient benefited by the physical therapy, a nourishing diet, and the ovarian substance. A firm binder should be used. The daily enema

and the other endocrine products could have been dispensed with. I see no indication for thyroid extract in an emaciated patient.

The *prognosis* as to life is good. The secretion may stop spontaneously after the menopause. A conservative removal of masses in the breast, being prepared to do an amputation at the time of operation if malignant disease is found, would reduce the later possibility of cancer (which is 10% in this disease) and probably remove the source of the secretion.

Discussion by Dr. Max Thorek, Chicago

In the very interesting case of Dr. F. G. de Stone the diagnosis to me, after studying the hypothetical problem, appears to be:

Tuberculosis of the breast with fistula formation through a "locus minoris resistentiae"—the nipple. The high-lights in the case which prompt this diagnosis are: the gradual loss of weight of which the patient complains, the presence of a secondary anemia, the discovery of a high lymphocytosis in the blood. The latter is augmented by the finding of lymphocytes in the serous discharge from the nipple. The absence of milk in the breast is significant. A great deal of importance must be attached to the axillary tumor which was found 15 years ago. This tumor undoubtedly was of tuberculous nature. It is a well known fact that tuberculous lymphadenitis will become arrested and the general condition of the patient would then improve. I believe this is exactly what happened in this case. General treatment of the patient resulted in marked improvement of her condition.

Chronic Mastitis must of course be considered, but in mastitis of the chronic type we do not find, as a rule, the serous discharge showing lymphocytosis. Besides, in inflammation of the breast we will expect greater discomfort—more pain if the inflammation were acute; and if chronic, more prominent signs of inflammation would give place to the insidious type of morbid manifestation.

Syphilis must be considered but is not probable in this case (negative Wassermann test).

As to the question of an *endocrine disturbance* this may be dismissed for the reason that only one breast is affected; that there are no other endocrine disturbances given in the history; also the fact that the increase of the discharge from the nipple became augmented during the menstruation.

We are justified, therefore, in assuming tuberculosis of the breast to exist. Now as to suggestions for management, prognosis, and treatment of the case, I should like to say that the first thing to do is to establish the diagnosis definitely. If that is done a more rational course of therapy may be instituted. I would suggest a very careful examination of the secretions of the breast for tubercle bacilli, also an inoculation of a guinea pig with the secretions of the breast. Careful observation of the results obtained from such inoculation should be made. The patient herself should be subjected to a painstaking and thorough examination for the existence of latent tuberculosis in some other part of the body (lungs, bones of chest, pelvis, etc.). She should also be given a Von Pirquet test, supplemented by a basal metabolic rating. The general treatment given by Dr. de Stone thus far seems to me excellent. I should particularly stress the improvement of the general condition of the patient by the means he is presently using.

It will be interesting for the readers of the "Seminar" to watch for further progress of the case and I hope Dr. de Stone will keep us posted on additional findings elicited later, which would aid to ascertain what the nature of the trouble is. However, rapid loss of weight causes me apprehension, particularly when dealing with a clinical entity which is apparently more than a benign glandular dyscrasia.

Solution by Dr. Geo. B. Lake, Chicago

In this case the solution must be only tentative, because much diagnostic information is lacking. It is reasonable to assume that pain is not a notable feature of the case; that the nipple is not retracted; that the chest shows no marked signs; and that there has been no return of the tumor in the axilla, because these rather prominent findings would, no doubt, have been mentioned if present.

What was the axillary tumor? Probably *not* tuberculous, in my opinion, because the age of 23 years is rather late for this condition; the tumor appears to have been solitary and was decidedly painful (tuberculosis adenitis usually shows matted masses of glands and the pain is slight); almost certainly not malignant, since the patient is alive and well 15 years later.

In my opinion it was probably an acute infection of some sort and had no relation

to the condition in the breast which developed 9 years later, though it is not impossible that there was a lowgrade tuberculous infection, which the patient resisted well, so that the only sign was the gradual loss of weight. This latter condition may, however, have been due to a mild hyperthyroidism. We have no data on this point—rapid pulse, tremor, increased metabolism rate, etc.

The breast condition is almost certainly *not* cancer. The patient is not in the usual "cancer age" (she was only 32 years old when the trouble began); there is no retraction of the nipple, ulceration or axillary involvement after 6 years; and she has improved rapidly under treatment.

It may be tuberculosis, but the symptoms seem to be against it. The condition is rather rare; retraction of the nipple and axillary involvement are the rule; a discharge from the nipple seldom occurs; and the condition would be unlikely to improve so promptly under the treatment given. On the other hand, the emaciation, secondary anemia and lymphocytosis positively necessitate further examinations, as suggested by Dr. Thorek. The Arneth blood count would be helpful. It shifts to the left in tuberculosis and to the right in syphilis.

I feel that we cannot rule out syphilis by one Wassermann test. The 10 years of sterility is suggestive. Further serologic tests should be made, and possibly a *luetin* test also. We should hear about the condition of the epitrochlear and post-cervical glands. A provocative or diagnostic dose of arsphenamine might be given.

Of the benign conditions, we can rule out retention cysts and other sequels of lactation, as the woman had never been pregnant. In such patients, practically the only condition which is attended by a *serous* discharge from the nipple is *chronic mastitis*. This is commonly bilateral, but may be unilateral and is rather common in women like this patient. Endocrine conditions (except, possibly, minor hyperthyroidism) may be ruled out, as suggested by Dr. Thorek.

I feel, then, that I can agree, in general, with Drs. Jacobson and Pavlin. My *diagnosis* is *chronic lobular mastitis*.

The etiology suggested by Dr. Jacobson is probably sound. It may be well to note that the very general wearing of tight *brasieres*, at the present time, may well be a common cause of chronic mastitis.

As to the *management of the case*, I consider this an excellent example of the disadvantages of miscellaneous and ill-considered treatment. *Something* helped the patient, but we have no very clear idea, among the multitude of therapeutic procedures, what it was. The general hygienic measures were probably of value—they help in most cases, of all sorts. The *physical therapy* treatments—except the ultraviolet, which was indicated for the anemia and general “run down” condition—were probably without benefit. The *endocrine* medication appears to have been “hit-or-miss.” The history, as given, shows no indication for gonadal therapy of any sort; there might have been some benefit from the thyroid substance; the parathyroid and nephritin were given without indications, as I consider the slight albuminuria to be without significance; *protonuclein* is a valuable stimulator of vital functions and body resistance, and was probably helpful. I can see no indication for drug medication, of any kind, in this case, except as I am about to outline.

I consider the *prognosis* good in this case, unless further examinations disclose the presence of tuberculosis, in which case it is still fairly good.

If a careful examination of the breast shows fibrous or nodular masses deep in the tissues I feel that they should be removed surgically. This can be done without serious disfigurement by lifting the breast from the pectoral muscles, after a semicircular incision embracing the lower two-thirds of its circumference, removing the abnormal tissues thoroughly, and then suturing the remainder of the breast back in place.

Postoperative treatment should include a liberal and carefully planned diet; sufficient exercise in the open air, supplemented by ultraviolet irradiations; intramuscular injections of the cacodylates of iron and sodium, with glycerophosphates; very probably a continuation of the protonuclein for several weeks; and possibly the intramuscular injection of boiled, fat-free milk (lactigen) or the intravenous administration of metaphen, neocarsphenamine, or armervenol, to increase the leukocytes and combat possible infectious conditions.

If tuberculosis or syphilis is found the treatment would, of course, be modified to meet these conditions.

We should be glad to have Dr. de Stone

give us further details of the progress of this case.

Problem No. 5

Presented by Dr. Max Thorek, Chicago

The following case has been referred to me for diagnosis and treatment:

Female, 30 years of age; white; married 4 years; *family history*, unimportant; married twice, two healthy children; venereal history denied. Constant *dysuria* for the past four years, worse prior to birth of second child.

Following her first delivery, the patient developed a high temperature while still in bed. This was followed by an acute arthritis involving the right hip, knee and ankle joints. After a stormy postpartum period, the affected joints remained more or less ankylosed.

A second pregnancy ensued. This time, immediately postpartum, another sharp rise of temperature (103-104° F.) ensued with involvement of the joints of the left upper extremity, particularly the elbow and wrist. When the temperature rose, during both puerperiums, it remained elevated for about four months.

The patient presents herself for treatment of the joint affection. She walks with a cane and cannot move the left elbow or the wrist. The joint affection is characterized by pain and the usual other manifestations of arthritis. A physician, attempting to break up adhesions of the left elbow, was unfortunate in creating a pathologic fracture of the lower third of the left humerus.

Upon *physical examination* we find a well developed young woman with all characteristic manifestations of a chronic arthritis involving the joints enumerated above, for the relief of which she had undergone a tonsillectomy in 1920. Examination of the cardio-respiratory apparatus reveals no abnormality; the gastrointestinal findings are also normal. Menstruation has always been irregular. The patient states that she believes she missed the last two menstruations but does not know whether she is pregnant or not because she has *always* been irregular in her menses.

Bimanual *gynecologic* examination shows the uterus somewhat enlarged, retroverted, definitely bound down by adhesions and projected backwards towards the hollow of the sacrum. Both adnexal regions are distinctly painful to pressure and *definitely*

(Concluded on Page 276)

Clinical Notes and Practical Suggestions

Colloidal Gold (Aurol) In Clinical Gastric Carcinoma

(A Case Report)

THE use of colloidal gold in treating carcinomatosis has received enough discussion in the past few years to warrant the belief that this report of a case so treated will prove interesting.

Mrs. S., age 70 years; height 5 ft. 4 in., weight, 120 pounds; married but never pregnant.

Family History: Parents had no malignant diseases and lived to a ripe old age. Several brothers and sisters, none of whom had any malignant diseases. No sign of diabetes or kidney disorders.

Personal History: The patient states that, for the past two years, she has had pain, which began very mildly, but which gradually increased up to six months ago, when it reached its greatest severity. At this stage her physician had to give her opiates to relieve the pain in the "stomach." Her stool she describes as being like gray paste, at times; at other times it is much darker and lumpy. She states that greasy foods are very nauseating and that solid foods are not well tolerated; that her appetite is poor and that she is losing weight rapidly; and that she has a very hard lump in her "stomach," which is tender at times and located in the painful region. Sleep has been possible only with the aid of sedative powders.

Symptoms: Pain and a mass in stomach; nausea after meals; belching at times; pasty, alternating with constipated, stools; jaundice at irregular intervals.

Physical Examination: Thyroid not palpable; heart, slight presystolic blow; beat strong with comparatively weak pulse; lungs, few coarse rales over the bronchi, otherwise negative.

Abdomen: Generally flabby, with marked absence of subcutaneous fat. Tenderness in upper right quadrant.

There is a mass about the size of a baseball immediately under the right costal margin, apparently attached to the lower edge or under surface of the liver and firmly adherent to it, but not to the skin; movable by the examining hand and with the movements of respiration; stony hard to the touch and moderately tender on firm pressure.

Skin: Ashy-gray in color, with noticeable absence of elasticity.

Reflexes: Pupils react to light and accommodation; knee jerks normal; Babinski's sign, negative.

Urine: Negative for albumen by the heat and by the acid test; negative for sugar by the Haines method; no test made for indican.

Stool: Gray-green in color, mushy in consistency; odor, rather sour, but now and then contains traces of ammonia; no pain on defecation.

Blood Examination: Red count, average 3,000,000; white cells, 8,000; in the differential count I have a record only to the effect that there were no megaloblasts; hemoglobin, 50 percent; color index, 0.6; Wassermann test, negative in all reports.

Gastric Contents: No free HCl; presence of lactic acid, Oppler-Boas bacilli and microscopic blood.

Points on which a diagnosis of malignant disease was made:

- 1.—Patient over 40 years of age.
- 2.—Continuous loss of weight and appetite.
- 3.—Anemia (after ruling out pernicious anemia).
- 4.—Stony-hard mass (after ruling out a bile-filled gall-bladder).
- 5.—Condition not yielding to simple treatment.
- 6.—Findings in gastric contents.

(No x-ray examination was made.)

Discussion: The patient, no doubt, had this condition developing over a considerable length of time, during which she may have had "spells of not feeling well," at times, but did not consult a physician.

When the true condition began to manifest itself, with the first attacks of severe pain, she went to the "doctor around the corner" for relief and, after obtaining it, promptly disregarded or forgot, or both, his advice to have herself taken care of. As they all do, she listened to the advice of her lay friends and relatives which included everything from mental therapy down to "herb brew," with a few pills or powders thrown in for good measure. The condition gradually became intensified, so that she probably hounded some good, old, reliable family doctor until, after he discovered that his good advice was being cast aside, finally, in desperation, gave her the temporary relief which she craved.

Treatment and Results: The patient was given 10 drops of aurocl (colloidal gold solution), in a half-glass of water, 3 times a day, before meals; a soft diet, of such nature as to produce a fairly regular and normal bowel movement daily; greasy or fatty foods were prohibited.

The pain began to diminish noticeably by the end of the first week.

After one year of this treatment, the patient shows a marked gain in weight (to about 145 pounds); complete absence (on palpation) of the mass; no more attacks of jaundice; and no more pain.

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MEDICAL CHARITY AND PROFESSIONAL COOPERATION

In many of the cities today the tendency of social workers and other investigators is to expect that our city hospitals, supported by taxation, intended for service to the poor people of the communities, the charity patients, will provide also a charity service for people who are abundantly able to pay. Two years ago I was in New York visiting the Mount Sinai Hospital, and in going around through the wards with one of the leading surgeons there, we found rich looking people with furs and diamonds. The physician remarked to me that what they needed at Mount Sinai Hospital was more capacity for private

patients. I said, "Do you mean to tell me those are not private patients?"

"No, they are all charity patients."

Then he turned and said, "Dr. Jackson, I wonder if you could estimate the percentage of work which I do for which I am paid in this hospital."

I realized that charity had been abused in New York and that a large part of work was being done charitably that should not be done on that basis, so I made a liberal estimate. I said, "I presume 50 percent of your work is charity."

He said, "If I could get that far along it would be fine. I get paid for eight of 100 operations that I do."

He was being paid for eight of 100 operations done for people who were able to come up to the hospital in limousines, who wore furs and diamonds—an absolutely unwarranted imposition on the good feeling and the altruism of physicians.

I believe the time has come when the medical profession must insist that its kindly efforts to work out these problems for the welfare of the people should be exercised gratuitously only on those who are unable to pay for themselves. And yet we face strongly today the choice as to whether we will become merely hired servants of the community and of the public or will ultimately have to endorse labor methods of self-protection. Therefore, we are facing, in the history of medicine, a troublesome time—a time in which organization of medical men must be more cohesive than it has ever been.

The whole point I am getting at is this: I think we need to get our men together in the sense of fraternal organizations, not unions, but that men should be brought closer together as fellows. We have our own problems to solve, and we must look after their interests, economic and social, as well as purely scientific.

JABEZ N. JACKSON, M.D.,

President, A.M.A.

(Extracted from *A.M.A. Bul.*, Dec., 1927.)

CARBON DIOXIDE IN ASTHMA

An asthmatic patient, female, age 37, who has had a cholecystectomy, hysterectomy, appendectomy, tonsillectomy, and a fractured tibia in her past history, has been having very severe attacks of bronchial asthma, sometimes relieved by epine-

phrin and sometimes not. She occasionally has attacks which last for two weeks, with no relief from anything. She had an attack a short time ago during which she took, hypodermically, 1½ ounces of epinephrin in 15 hours, with no relief.

On sending her into the hospital, relief was immediate, following the inhalation of CO₂ gas. Over a period of 5 days each attack was relieved within a minute or two by CO₂ inhalations, after which time the attacks ceased and she was discharged.

I believe, from this experience in one case, that CO₂ gas should be listed as a relief measure in bronchial asthma during the attack.

The mask was held firmly over her face during the inhalations.

This patient is negative to 140 different skin sensitization tests.

J. R. STURRE, B.S., M.D.,
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MENTAL STATES AND PHYSICAL SYMPTOMS*

The brain has been developed, like the other organs, for a specific purpose. The old brain, or cerebellum, has been developed to take care of the more or less automatic responses having to do with matters of muscle tonus and the workings of the muscular system. The new brain, the cerebral hemispheres, has been developed to take care of the superior responses, involving memory, selection of what should be done by the individual in making his adaptation, and to provide for what is called feeling. Judgment is dependent upon our memory, in passing in review previous experiences and selecting from them what seems to be the best procedure to make the adaptation that is necessary to the present instance. The release of energy to accomplish this adaptation is spoken of as volition.

The matter of feeling is something that is very difficult to define. It is hard to say what emotion really is. It is thought of as a mental state, and yet it has a physical accompaniment by which an outsider recognizes that a certain individual is experiencing emotion. It seems to be a reaction of the entire organism, involving a direct connection between mental states and physical phenomena. These physical phenomena are connected with functions of the skin, respiratory system, gastrointestinal system, vas-

cular system, genitourinary system, etc. All the systems of the body seem to be involved at various times in the expression of emotion. Many of these physical phenomena were made use of by the old-time doctors in making a diagnosis of typhoid, malaria, pneumonia, etc.

Nearly all the physical manifestations of disease have been noted in patients not suffering from physical disease. Everyone is familiar with the manifestations that have been recorded in cases of shell-shock, hysteria and so forth. Some time ago I saw an old lady who came into the dispensary on crutch and cane. She was hopping along quite well. She looked well and the neurologic examination revealed none of the ordinary symptoms of the organic form of paralysis, and yet she was paralyzed; she could not use one of her limbs. A little inquiry revealed the fact that, not long before the onset of the paralysis, she had suffered a very severe monetary loss—some thousands of dollars, all her savings. There was no time to go into a particular analysis of the situation but it seemed perfectly evident, in the absence of the physical phenomena of an organic disease of brain or nervous system, that this old lady had fortified her equilibrium with crutches; that is, she had lost her financial footing and substituted an actual physical crutch, to give her the support that she thought was lacking.

There is probably no purely mental state without its physical reflection. An abnormal mental state is either due directly to a disease of the brain itself or to a lesion elsewhere in the body. I am particularly interested in a consideration of the physical phenomena involving or accompanying mental states, where there is apparently no discoverable lesion in the body. A woman, married and a housewife in comfortable circumstances, came in complaining of a headache which she had had for about three and one-half years. She had consulted an eye man, who found nothing wrong with the eyes. She had been examined by one of the best ear men in the city and no trouble found in the ears or sinuses. She had been gone over by a very good internist, who had found nothing radically wrong with her make-up. On examination nothing wrong neurologically was evident.

After a few interviews she told of having led a rather repressed childhood, following which she came to the city where she

*Abstract, from *Bul. North Shore Branch, Chicago M.S.*, of paper read October 4, 1927.

became an architect's assistant and also studied music. She married a man twenty years her senior. He took her to a suburb where she got along nicely while her children were young and she had plenty of outlet. Then they went away to school and she was left with less to do. As she talked she began to cry. The next time she came in she was very much better. She said the headache had bothered her only a little. At the following session she was much better. She had had a long talk with her husband and she was going to have a grand piano and begin the study of music. This patient presented a physical symptom that apparently voiced her protest against conditions as they were.

Traumatic neuroses are most excellent examples of the condition of physical phenomena produced by mental states. It is generally recognized that traumatic neurosis commonly is a condition caused by a desire for compensation. Cases of this character are greatly increased in number since the advent of the workmen's compensation act.

CHARLES F. READ, M.D.,

Chicago, Illinois.

ACUTE GONORRHEA

The ordinary case of simple acute gonorrheal urethritis will cure itself, if left alone, in the course of one or two years. Internal medication has no effect. The simpler the treatment the better the results.

The disease, at the beginning, is confined to the anterior urethra, and the treatment also should be limited to that area; but many cases are given a bladder irrigation of potassium permanganate solution and the disease is thus distributed to the bladder, prostate, and other structures.

How common it is to see a simple case of specific anterior urethritis, amenable to ambulatory treatment, through injudicious irrigation of the urethra and bladder, consign the trusting patient to months of suffering and invalidism!

An amusing commentary on the subject of the simpler treatment of gonorrhea in the male is contained in a report of the prevalence of gonorrhea in Greenland, published in the Venereal Disease Information of the United States Public Health Service. This stated, regarding the cases reported the previous year, that those who had received no treatment were, in the main, cured; while only those who had received

hospital treatment developed complications.

Metaphen is an ideal drug for urethral injection, used in a strength of from 1:5000 to 1:4000. A two-dram syringe will contain sufficient to distend the urethra when retained under pressure. Smears made from seven to fourteen days after the injections of metaphen have been commenced show the gonococci to have disappeared from the discharge. The gonococcus is often found present in smears after the patient has used a silver preparation for several months.

Epididymitis, if it occurs, is readily cured by four intravenous injections of sodium iodide, at 48-hour intervals. A recent unfortunate case of sterility was due to the injection of mercurochrome into the vas—a regrettable procedure in a young man.

The incidence of urethral stricture has much diminished in recent years, and this is probably due to less exploitation of the sound.

Microscopic examination of every urethral discharge is necessary in order to differentiate between gonorrhea, simple urethritis, spermatorrhea, and prostaticorrhea.

R. STEWART MACARTHUR, M.D., C.M.
Los Angeles, Cal.

[The moral is: *Know* what is the matter; *Know* what you intend to do to correct it, and *why*; *Know* what drugs or procedures will accomplish the desired results, promptly and without danger to the patient; and then go ahead, *boldly*.

An ounce of Knowledge is worth a ton of guesswork!—ED.]

FAIRY TALES OF PROCTOLOGY "All Fistulas are Tuberculous"

Here is a situation where intelligence counts—one of those situations of brains versus something else. At any rate those past the second reader know that, if logic can be brought to bear on a subject, all difficulty in understanding the truth in the matter vanishes.

So it is in this matter of rectal fistula. There was a time when no one knew, what the exciting factor was. Then some claimed that all fistulas were tuberculous; others that they were merely improperly drained abscesses. This discussion raged in medical literature for eons—or at least fifty years. In fact, in less enlightened circles,

doubt still smolders. But the better class of reasoners have established the unvarnished truth by the simple application of logic, as follows:

Tuberculous people sometimes have abscesses; these frequently result in fistulas; such fistulas are slow to heal. Hence, and therefore, any fistula which won't heal is tuberculous. There is no sense in properly draining a fistula of this kind because, being tuberculous, it won't heal anyway. Especially in people who really have tuberculosis there is no sense in draining the fistula, because it might possibly heal and spoil the diagnosis. Moreover, by healing such a fistula, we remove a drain upon the patient's vitality and help him in his fight for health; this is not good for a fistula's reputation.

In order to maintain the dignity and tradition of tuberculous fistulas, neglect them thoroughly or jam them full of bismuth paste. Under no condition establish adequate drainage by opening all the tracts, curretting and careful dressing. If you feel compelled by opinion to operate, just open up one tract (a small one will do), and don't look for any branches of the tract—they will come in handy later. Then neglect the dressings (once a week is often enough) and allow pus pockets to form. Tell the patient it is tuberculous, without making an examination of the excised tissue. Tell him it is a forerunner of tuberculosis of the lungs. Worry him and neglect his fistula until he really does get tuberculosis and then you can say with a smile (if you are that kind), "See! I told you so!"

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RECENT ADVANCES IN THE THERAPY OF HEART FAILURE*

Even in the milder grades of cardiac failure, the patients should be put to bed and the directions for their guidance must be perfectly specific. They should be told not to do anything that they can have done for them until the condition is greatly improved; then exercise can be added very gradually. They must have mental as well as physical rest, and an abundance of sleep. For many years I have used morphine for

inducing sleep in many of these cases, and have no reason for regret.

Another method of cardiac rest which is frequently neglected is free bleeding. In properly selected cases nothing gives such striking effects as venesection, withdrawing a pint and sometimes a quart, particularly in the cases that point to failure of the right heart.

Digitalis is the most useful drug in cardiac therapy, although not adaptable to all cases or useful in all states. Any standardized preparation can be used, and if used in sufficient quantity nothing approaches it. The average amount of digitalis which is necessary to digitalize an individual is 2 grains per pound of body weight, and then a much smaller quantity to maintain the digitalization.

The theobromine derivatives are now largely used as diuretics. They do not always work, but are found to be of more benefit in the vascular cases, as a rule, than in the rheumatic. Recent experimental work suggests that they act indirectly through the heart rather than directly through the kidney. The theobromine derivatives have a direct effect on the coronary vessels and greatly increase the flow of blood through them, which is of much importance, and one of the greatest advances in cardiac medicine in recent years.

Myocarditis is apparently increasingly frequent, and a surprisingly large number of physicians develop this disease. If the cases can be recognized early, and the various drugs used which increase the flow through the coronaries and improve the condition of the musculature of the heart, many lives can be prolonged materially. The preparation which has been used most is diuretin (theobromine-sodium salicylate), and the higher the percentage of theobromine content the more effective it proves. Most patients are not able to take theobromine over long periods without developing gastric disturbance. The ordinary dose can rarely be kept up for more than three or four days, although some individuals can continue it for a month or two without apparent discomfort. Agurin is much better borne but has never become popular. Theocin (synthetic dimethyl xanthin) is an allied body and probably the most effective, but causes the most disturbance. Euphyllin is another form and is better borne. Any one of the derivatives of theobromine can be used for three or four days and then

*Abstract, from *Bul. Chicago, M.S.*, of paper read Nov. 2, 1927.

stopped, digitalis given for three or four days, and then the theobromine resumed. The principle on which it is used is absolutely sound, but one must not expect a 100 percent return.

In the cardiac failure that is due to *syphilis*, one should not treat the individual vigorously with arsenicals, for syphilitic aortitis is different from syphilis anywhere else in the body. The syphilitic exudate should be removed as slowly as possible, to permit the development of scar tissue and prevent the formation of an aneurysm. Small doses of *iodides* should be used over long periods of time before resorting to more vigorous methods of treatment.

Many years ago, calomel was largely used as a diuretic, but had to be given in large doses and was not always successful. During the last few years two mercurial preparations have been introduced which are used with great benefit in heart and liver cases, but do not work well where the kidneys are most affected. The first was *novasurol* and more recently *salyrgan*. Both should be used freely but both should be preceded by the use of ammonium and calcium salts, for two or three days, the drug then being administered intravenously. This usually increases the urinary output very largely, but one must not forget that he is dealing with a mercurial and if used often enough there is sure to be evidence of more or less severe mercurial poisoning. Neither of these drugs should ever be used in cases where the kidneys are involved to any degree, for they do not stand mercury well. *Salyrgan* appears more efficient than *novasurol* and contains much less mercury. Both are extremely useful and are not used as often as they should be.

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NEONAL AS A SUBSTITUTE FOR OPIUM IN PSYCHOSES

We have given about fifteen hundred doses of neonal. What we had looked forward to in this drug was a substitute for tincture of opium in our depressed and agitated patients; but the clinical application has not been confined to these cases alone; we have used it in hypomania and other forms of mental excitement and, to a limited extent, in the treatment of morphinism.

About 25 patients with depression and 10 acutely disturbed patients were put on

this drug. The dosage of opium, to begin with, was cut in half and gradually reduced as the neonal was increased, and we found that the neonal therapy corresponded favorably with that of tincture of opium. No case was found that did not show prompt response to the drug. Some patients, of course, showed greater response than others, but in only one did we see symptoms of overdosage, and this woman was given three tablets ($4\frac{1}{2}$ grains—0.3 Gm.) in one afternoon and evening. The drug was discontinued the next day, but its effects lasted for about forty-eight hours. She showed nothing further than mild mental confusion, dizziness and unsteadiness.

In the five weeks that we have used this drug, we believe that it has an important place in this work. We do not feel that in all cases it will supplant opium but have found it to do so in many instances.

The work on these cases was done by my associate, Dr. Merle Q. Howard.

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LACTIC ACID-MILK IN FAT INDIGESTION (A Case Report)

On Nov. 23, 1927, I was called to see an infant, supposedly just starting a convulsion. During the evening he had been twitching, refusing his food, and was becoming drowsy.

Past History: Baby P.D., age 2 months, was considered a normal baby. He weighed $5\frac{1}{2}$ pounds at birth; took the breast eagerly and regularly for 4 days, when the physician in charge, ill advisedly, took the baby from the breast and placed it on Dryco. The reason for this sudden weaning was never quite clear to the mother, nor to me. However, the baby gained and seemed quite contented.

Present History: On Nov. 22, the baby (his weight at this time was 7 lbs. 2 ounces) started vomiting, having attacks of colic and loose bowel movements. This continued the next day, plus a generalized twitching and drowsiness.

Examination: Entirely negative, save for a lax, pendulous abdomen, greatly distended with gas. Examination of the stool revealed the following: cream-yellow in color; very offensive in odor; highly acid in reaction; some shreds of mucus present;

and many small fatty particles which looked like small pieces of soap scattered throughout. The stool appeared to me as being thoroughly typical of fat indigestion.

Feeding: Dryco was discontinued and a formula consisting of whole-milk, boiled water and Dextri-Maltose was substituted. This failed to help us. Condensed milk and water was given, but this also failed. On Nov. 25, lactic-acid-milk (after Marriott) was given and wonderful results followed. The weight on this day was 7 lbs.; Nov. 26, 7 lbs. 4 ounces; Nov. 29, 7 lbs. 10 ounces; Dec. 3, 8 lbs. 2 ounces; Dec. 14, 9 lbs. 7 ounces; Jan. 20, 12 lbs. 13 ounces; and on Jan. 27, the last day I saw the baby, the weight was 13 lbs. 6 ounces. The vomiting ceased, attacks of colic became less frequent and finally disappeared and the stools became fewer in number and much more normal in appearance.

Medication and Accessory Feeding: Atropine, 1/500 (0.13 mgm.) was given before every other feeding, for about 10 days. Orange-juice and cod-liver oil was added, two days following the introduction of the lactic-acid-milk.

Comment: This case is of unusual interest because of the rarity of fat indigestion in Dryco feedings. I could find no case reports of such a condition in the available literature. Possibly my diagnosis was in error. However, we had a difficult feeder and the result obtained from the feeding of lactic-acid-milk, in this case, was nothing short of brilliant. Let me add, that I have used lactic-acid-milk in several difficult feeding cases with wonderful results.

CLARENCE G. THOMPSON, M.D.,
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THE JEALOUS CHILD

We are all familiar with one or more of our friends or acquaintances who have what we call a jealous disposition. Not only are they jealous in reference to their love and friendships, but also of good fortune which falls to others. Pleasure and happiness can be only temporary for this type of individual. Their satisfaction with life is constantly being interrupted by their attitude toward the achievement and happiness of others.

One of the most common situations which stimulates jealousy in the child is the birth of a new baby. This is not surprising when quite suddenly and unexpectedly this child of 3 or 4 finds his mother devoting practically all her time to the intruder. It may be that the child has been through a period of worry and upset. Often the older child is sent away during the mother's confinement. This may be the first time he has ever been away from home, and adults can little appreciate what this may mean to him, even though he be with the most well-meaning of relatives. His entire world is in an upheaval. How can he know that it will ever come right again? He puzzles his little head over this, is told time and time again that he is going back to mother and daddy, but when he gets there he appears to be supplanted. Or it may be that he stays at home, and mother is taken away to the hospital with little or no explanation to him. Again he is faced with an upset world. Why has mother left him? Will she really come home again? Then she comes, but not with undivided attention for him. Mother's love and attention must be shared; small wonder that feelings of hatred for the baby are aroused.

However, this attitude toward the newborn baby can invariably be overcome if the older child is confided in and told he may expect a new little brother or sister. He then awaits its arrival with interest and pleasant anticipation. Handled wisely, what might be a most unpleasant event in his life becomes a real pleasure which will mean companionship and a new playmate—someone to care for and protect. This sense of responsibility will work out to the advantage of both children.

If, in the course of events, the older child does become jealous of the baby, never foster this attitude by teasing or encouraging it, or by looking upon it as something that is "funny" or "cunning." The emotions of childhood are far too dangerous to be toyed with in this way. Intelligent parents will find numerous ingenious ways to convince the child that he is still just as much loved and as important a member of the household as he was before the "usurper" arrived. It is simply a matter of giving the older child a little more time and attention, and a little assurance that he still holds the affection of those he loves.

D. A. THOM, M.D.,
Boston, Mass.

THE DOCTOR AS AN ARTIST

The doctor is at once artist and scientist.

The old doctor was more artist than scientist.

The new doctor is sometimes more scientist than artist.

No other profession makes quite so many demands upon a man in the way of:

Richness of personality.

Breadth of intellectual interests.

Catholicity of sympathy.

Expertness in the technics of human relationships.

The great doctor must have the severity of mind of the scientist, for only so can he treat the disease intelligently.

The great doctor must have the sensitiveness of spirit of the artist, for only so can he treat the patients intelligently.

The old family physician who came up through the apprenticeship of sickroom and night rides into the back country, may have been inexpert in handling test tubes, but he was often adept in handling patients.

The advance of the scientific study of disease has given us doctors who are better scientists, but the call remains for doctors who are artists in the handling of the human being in whose body the disease has become an unwelcome tenant.

Aside from the demand for scientific knowledge of disease that the medical profession makes on the doctor, there are other demands that might well discourage any man from entering practice.

The great doctor must know almost as much about the social order as the sociologist.

This is true because the varied forces—political, social, economic, industrial, educational, religious—that march across a nation, making its mind or marring its spirit, register their effects in the lives of the doctor's patients. The more the doctor knows about these forces that make the atmosphere in which men's minds and

bodies live, the more intelligently can he trace effects to their causes, and the more wisely can he counsel his patients.

The great doctor must know almost as much about the mind as the psychologist.

This is true because even the most materialistic scientist admits that there is a subtle relationship between mind and body that the doctor of the body dare not overlook, for when he does overlook this relationship a thousand quacks rush in to capitalize his failure.

The great doctor must know as much as the priest about the subtle art of counseling.

It is in answering these demands that the doctor becomes artist as well as scientist.

GLENN FRANK,

In the *Chicago Daily News*,

January 11, 1928.

THE SEMINAR

(Concluded from page 268)

enlarged. Examination of all other organs gives negative findings.

X-ray examination of the joints confirms the physical findings. Since her illness began, there has *always* been some albumin in her urine. The blood picture appears normal.

Requirement: Keeping the facts in mind that this patient was *desperately ill* during both confinements; that after the birth of each child she became crippled in a number of joints; that she has a chronic urethritis (smears now negative); that there is an abrupt flaring up of the temperature and that the findings in the pelvis disclose bilateral tubal involvement; and that she has always been irregular in her menses; also that all forms of local treatments, at the hands of competent physicians, for the improvement of her joint condition, have thus far proved futile, and the possibility of pregnancy existing, *what would you do for the patient?*

The Leisure Hour

Hymn to Light and the Sun

Part III

To the Sun

Sun, sun!
Hid in the brightness of your rays,
Crowned with your crown of beauty,
You go upon your way.
Worlds obey the commands of your strength.
Queen, every fold of your flaming shroud
Is as a belt of stars!

Round about in the spaces rages the darkness,
Darkness and threat of cold.
You have the might of life eternal.
Power was given to you.
Queen, a spark of your flaming splendor
Gave us all life!

See, I am but an atom of dust,
Shining with warmth from you,
Burning with fire from you.
When my days must go in their turn
Towards the darkening waters,
Let me, O Sun, when I go, burn,
And burning sink in the waters.

*Translated from the Swedish of DR. ERNST V. KNAPE,
By Miriam Heideman Krarup.*



Products and By-Products

IN a secluded forest lived a savage tribe, the members of which eked out a bare existence on berries, nuts, roots, and game, and housed themselves in rude shelters. One tree in the forest towered far above the rest, and bore dense foliage. Tradition had it that the god who created the forest had forbidden anyone to climb that tree, and that men had been put to death for doing so.

Once a young man of the tribe developed an uncontrollable curiosity. He must examine everything. "Surely," he said, "it cannot be wrong to climb so noble a tree! At least I can go to the first limb." Having reached it he saw to his surprise a strange fruit. Removing its coverings, layer after layer, he came at last to a polished seed with curious markings.

Hastily he descended with his trophy. The tribespeople crowded about, shocked but curious. One of them said, "What is it good for?" "I cannot tell," returned the young man; "I only know it is the most beautiful thing I have ever seen." When the storm of disapproval subsided he climbed the tree again, this time a little higher, and by and by brought down more fruit.

No two seeds were alike, yet all bore the markings. He did not keep the seeds to himself, but passed them about in the tribe, where the more curious persons pondered on the markings. The young man might have come to grief for his rashness but for the fact that practical men began to profit by the husks he threw down. Some layers made good food, while others supplied strong fiber for cloth and rope, much wanted in the tribe.

As time passed, the young man came to dream of nothing else but finding more seeds. Two or three curious youngsters allured by the strange seeds, joined in the search.

One day the Climber said to the tribe, "We need rope to climb higher." He was now tolerated, for the husks had value, and there was scrambling for those that fell. So a tribesman answered, "I will furnish rope if you will bring me a basket of husks each day." But the Climber said, "You do not understand. Sometimes I find a seed with almost no husks, and again a large husk is found about a small seed. I am glad the husks are useful; indeed, the thought of this spurs me on. But the seeds

are what I seek. I have no time to collect husks."

Then another, who was more farsighted than the first, and who also had a secret sympathy for the young man's interest, spoke up: "You may have the rope to hunt for your precious seeds. I will take a chance on your bringing me husks." "Fair enough," cried the Climber; "have patience and you will get them." This proved true, for in time the Climber found many new seeds.

The tribe prospered as never before, since many articles were made from the husks. Healing for their diseases sprang from the same source. The climbers were no longer thought impious or mad; rather, they received a certain measure of praise when one of them brought down a particularly large husk. But for the seeds and the wisdom they spelled, only a few of the people cared.

The little band of seekers worked feverishly. They had discovered that the seeds fitted together to form a design in which they could distinguish, now scattered letters, here a word, there a whole sentence. "Now I know," the Climber told the tribesmen, "that there is a God, not because you told me, but because of the design."

By this time the climbers were working higher up and farther out on the branches of the great tree, and more and more tackle was necessary. The tribe was now well able to furnish it, but the members were very busy making things from the husks.

From time to time quarrels occurred in the tribe, as they always had. In order to be prepared for these quarrels, the factions used a large part of the supply of husks to make heavy clubs with which to belabor each other. And some said, "This is the Climber's fault, for he gave us the husks."

There were encouragements, too, for sometimes one of the tribe would say, "I have been looking at this design, and it is indeed marvelous. I will furnish more tackle, and perhaps a new sentence will be filled out." So the design grew, and the workers climbed on and on.

They had a place of some honor now, provided they did not spell out a design too contrary to tribal tradition; yet their place was not equal to that of the rulers of the tribe, or the successful makers of articles from the husks; for they spent most of

their time in the tree, and people easily forgot them.

The Climber minded this not at all. His life was in the quest. As he went higher he saw that the tree reached to heaven, and that its fruits were innumerable. But he was not downcast; on the contrary he rejoiced, for he saw that his greatest happiness lay, not in having the design complete, but in searching it out.

DR. AUSTIN M. PATTERSON,
From *Antioch Notes*.

JUST CARRIED ON

"To what do you attribute your longevity?" inquired the long man.

"To the fact," replied the old man, conclusively, "that I never died."—*Medical Suggestions*.

After many years of study, a Vienna doctor announces that he has discovered a cure for asthma. At last Vienna has done something to atone for psychoanalysis.—*Cleveland Plain Dealer*.

Another thing that goes to show you whatever it goes to show you is an advertisement of the Keely Institute, which reads, "1926 Was Our Biggest Year Since 1917."—*Macon Telegraph*.

A physician's small daughter was sent to bed supperless just before her father's return from his calls. Hearing him enter, some time later, the young miss called down:

"Mamma, I want to see Daddy."

There was no response from below. A moment later:

"Mamma, please let Daddy get me a drink of water."

When that, too, failed, a small white figure came to the head of the stairs and said sternly:

"Mrs. Mathews, I am a very sick woman. I must see my doctor at once."

Needless to say, the doctor went up.—*Pharmaceutical Advance*.

THE SUBWAY TALKERS

"And did you vote today?"

"Me? Sure I voted."

"I mean, did you cast your ballot?"

"Sure I cast my ballot."

"Who did you vote for?"

"Who did I vote for?"

"Yeah."

"Me, I'm a Republican."

"Did you vote for the amendments?"

"Sure I voted for the amendments."

"Did you vote for the Sixth Amendment?"

"I voted for them all."

"I bet you don't even know what the Sixth Amendment is about."

"Who don't?"

"You don't."

"You're crazy. It's about honor your father and mother."—*New York World*.

DISPOSING OF THE REMAINS

Opal: Br'er Congo, I hear Sis Johnson's dead. When's she gwine be interned?"

Br'er Congo: They ain't gwine be no internement, cause de fambly's done decided she's gwine be incriminated.—*Life*.

A QUESTION OF BOTANY

Johnnie: "Where did your baby brother come from?"

Billie: "Dad said the doctor found him under a cabbage leaf."

Johnnie: "That's what my dad said about me, but I asked the doctor one day and he said it must have been a fig leaf."

—DR. M. E. BOVEE.

A NEW WAY

"Doctah," asked a lady of color, "Ah's come to see ef yo' am gwine order Rastus one o' dem mustard plasters ag'in today?"

"I think perhaps he had better have one more," answered the medico.

"Well, he says to ax yo' kin he have a slice o' ham wid it, 'count of it's a mighty pow'ful perscription to take alone."—*Patchwork*.

Diagnostic Pointers

PRECLINICAL SYMPTOMS IN PROCTOLOGY

Constipation, alternating with diarrhea, is often the initial symptom of rectal or colonic cancer.

From the purely proctologic viewpoint, diarrhea, especially that occurring in the morning, is usually indicative of one of four conditions; namely, inflammation, stricture, ulceration and neoplasm.

Excluding hemorrhoids, fissure and polyp, bleeding from the rectum is invariably significant of a serious and destructive lesion, particularly when the blood is mixed with pus or mucus. It should never be too hastily ascribed to hemorrhoids alone.—DR. RUDOLPH V. GORSCH, in *M.J. & Rec.*, Sept. 21, 1927.

BASAL METABOLISM IN PREGNANCY

A basal metabolism of 15 to 25 plus is normal for a pregnant woman.—DR. WM. ENGELBACH, St. Louis, Mo.

CYSTITIS AND PYELITIS

While a chronic cystitis may be secondary to a pyelitis, a pyelitis may also at times be secondary to trouble in the lower urinary tract. Never fail to look for residual urine. Never fail to include the urethra in your examination.—*Urol. & Cutan. Rev.*

GASTRIC CRISES OF TABES

Most people with a pain in the stomach apply heat almost instinctively.

The patient with gastric crisis of tabes does not do this, because the skin is exquisitely sensitive to heat and cold, so that the hot-water bottle causes more suffering than the original pain.—DR. A. W. ADSON, of the Mayo Clinic.

"STRATEGY" OF OBSTETRICS

It is by antenatal care alone that one is able to recognize and overcome the serious and sometimes fatal complications of pregnancy; it is by this method of study that the accoucheur is enabled to anticipate and prevent the various complications of labor; that grave disorders, both systemic and

pelvic, are recognized and successful measures taken for their control.

Prenatal obstetrics is by far the best type of obstetrics because it is preventive obstetrics.—DR. P. BROOKE BLAND, of Philadelphia, in *The Med. Times*, Sept., 1927.

LUMPS IN THE BREAST

Chronic, cystic mastitis is responsible for 75 percent of lumps in the breast; but do not forget that, in 50 percent of cases, chronic lactation mastitis is difficult to distinguish from cancer.—DR. JOSEPH H. BLOODGOOD, of Baltimore, Md.

POLYCYTHEMIA VERA

An excess of red cells in the blood is rare. The count may go to 7 or 8 million. The cells are reticulated, showing that they are "young." There is probably hyperactivity of the red bone marrow.

The symptoms are: redness of the face; a feeling of tension and headache; "bursting" sensation on stooping; a tendency to hemorrhage; enlargement of the spleen.

No curative treatment has been found.—DR. J. A. MCINTOSH, of Memphis, Tenn.

TIRED CHILDREN

The chronically tired child is a sick child, and should be so treated. Failure to recognize his condition or to misinterpret it may drive the unfortunate subject into chronic invalidism and a wrecked life.—DR. SAMUEL MCC. HAMILL, in *Child Health Bul.*

DIFFERENTIAL LEUKOCYTE COUNT IN APPENDICITIS

The differential blood cell enumeration and the relation of polymorphonuclears to the total count constitutes the most valuable diagnostic and prognostic aid in appendicitis. The greater the variation from normal, the more certain are the pathologic findings; and in extreme disproportions the method has proven itself practically infallible.

A rising polymorphonuclear count, disproportionate to the increase in leukocytes, indicates the existence of pus, gangrene, thrombosis or spreading infection and calls

for immediate surgical intervention. A stationary, parallel line (leukocytes and polys. increasing in the same proportion) calls for surgical relief, but not necessarily of an emergency character.

A falling total leukocyte count does not necessarily mean a subsiding disease. It may indicate broken resistance, overwhelmed by a massive, highly virulent infection or other cause.

A falling total count, with a stationary or rising neutrophil percentage, demands immediate operation.—DRS. M. P. NEAL AND D. A. ROBBETT, in *Med. Herald and Physiotherapist*, November, 1927.

GENERAL PUS INFECTIONS

A general infection with staphylococci is much more often fatal than is one with streptococci.—DR. DEAN LEWIS, of Baltimore, Md.

THE KNEE-JERK REFLEX

In eliciting the knee-jerks, I have found the procedure simplified by laying a finger across the tendo patellae, and bumping it with the other hand. It can be done thus with the eyes shut, on the fattest individual, fully clothed. If the patient is lying down, the palm of the hand is placed beneath the knee, the thumb lying across the tendon. The knee is lifted a little, and the thumb is struck with the other hand.—DR. TASKER HOWARD, *Long Island Med. Journ.*, June, 1927.

GASTRIC ULCER AND ANEMIA

Gastric ulcer, in dogs, occurs only in the presence of anemia.—DR. C. S. WILLIAMSON, of Chicago.

SINUS DISEASE

If, after ten days or two weeks following an acute nasal catarrh, headache and stiffness in the nose increase; if there has not been much improvement in the patient's general condition; and if, on examination of the nose, you find the mucosa of the nasal chambers much engorged, with very little space between the turbinates and the

septum and possibly with free pus in the nose or nasopharynx, you are dealing with a sinus condition.—DR. MORRIS A. WEINSTEIN, in *Therap. Gaz.*, March 15, 1927.

PRURITIS

Transitory attacks of essential pruritus that cannot be accounted for by the more usual causes should lead one to suspect a neuro-psychic state accompanied by hysterical polyuria.—*Urol. & Cutan. Rev.*

DIAGNOSIS OF DIAPHRAGMATIC PLEURISY

In a person lying on one side, the half of the diaphragm on the dependent side makes a larger excursion than the upper half.

Dr. Gerald B. Webb, of Colorado Springs, says, in *J.A.M.A.*, August 20, 1927, that a patient with diaphragmatic pleurisy will have an increase in pain if placed on the side suspected, the increase being due, no doubt, to the preliminary increase in the excursion of the lower half of the diaphragm. This will serve as a diagnostic test.

APPENDICITIS AND OVARITIS

Non-puerperal ovaritis and appendicitis must be carefully differentiated. They both have sudden onset, pain, tenderness and fever. Vomiting with nausea is very common in appendicitis. Muscular rigidity of the right rectus, with especial tenderness over McBurney's area, is somewhat characteristic of appendicitis. In appendicitis the onset is more of a general abdominal pain; while in acute ovaritis the pain is confined to the lower pelvic region, and the general systemic disturbance is not nearly so great.—DR. GEO. B. NORBERG, in *"Golden Rules of Gynecology."*

ANGINA PECTORIS

Tender spots on the chest wall, persisting for a long time after the attacks, were present in 48 out of 55 cases of angina pectoris examined. — DR. M. H. KAHN, in *Am. J. Med. Sc.*, Mar., 1927.

Current Medical Literature

THERAPEUTIC USES OF CALCIUM

In *Brit. Med. Jour.*, Oct. 29, 1927, Dr. F. B. Fraser, Professor of Medicine, St. Bartholomew's Hospital, London, gives some indications for calcium therapy.

In *nephritis* calcium therapy is indicated, as the total calcium of the blood serum is definitely reduced. For the toxic state known as *uremia* there would be reason to administer calcium to lower the absorption of phosphates.

In *tetany*, following thyroidectomy, the oral administration of calcium salts in excess can raise the lowered level of calcium in the serum and relieve tetany.

Skin diseases. In various skin diseases low values for the serum calcium have been reported.

Chronic infections. In many and various diseases associated with chronic infections, investigators have found that, although the total calcium content of the serum is within physiologic limits, the amount of active or diffusible calcium is reduced. Also that the oral administration of parathyroid extracts and soluble calcium salts was beneficial in these conditions, by raising the ratio of active to total calcium.

Hemorrhage. There is sufficient ground for the view that there may be a scope for calcium therapy in the control of hemorrhage.

CALCIUM AND BLOOD PRESSURE DURING PREGNANCY

Dr. E. J. Stieglitz in *Arch. Int. Med.*, Apr. 1927, reports results of 222 blood-calcium determinations in normal pregnant women. He found that hypocalcemia is not of major etiologic significance in arterial hypertension in pregnancy. During the last month of pregnancy, however, a gradual rise in arterial tension is associated with moderate hypocalcemia. There is a fall in the blood pressure immediately following parturition. At the onset of lactation there is a secondary rise in arterial tension, with a corresponding hypocalcemia.

STRABISMUS IN CONGENITAL SYPHILIS

Strabismus is not usually mentioned in textbooks as one of the eye lesions associated with syphilis.

In *J.A.M.A.*, Feb. 4, 1928, Dr. L. B. Dickey, of San Francisco, mentions that, during the past year, 7 of 27 patients with late congenital syphilis showed strabismus.

All had a positive Wassermann reaction, but the spinal fluid Wassermann test was negative in five. The 2 patients in whom the spinal test was positive showed other eye lesions, as well as strabismus.

The author thinks it well to make a Wassermann test in children suffering from strabismus, whether there is or is not other evidence of syphilis.

O-IODOXYBENZOIC ACID (AMIODOXYL) IN INFECTIOUS ARTHRITIS

Dr. John B. Youmans, of Nashville, Tenn., in *Ann. Intern. Med.*, Jan., 1928, states that of 80 patients with infectious arthritis, treated with o-iodoxybenzoic acid (amiodoxyl benzoate) nearly three-fourths were markedly or moderately improved; the remainder showed little or no improvement. No serious untoward effects were noted.

Ammonium iodoxybenzoate was given intravenously, at body temperature, in doses of one gram—100 cc. of a 1-percent solution. The drug was prepared by dissolving it in warm, sterile, freshly-distilled water. The administration was by the gravity method, over a period of seven minutes or more. Treatments were given twice weekly, 6 to 10 treatments constituting a course. Ordinarily, from one to three courses were given, with intervals between of from 2 to 8 weeks.

When the rectal route was employed, doses of two grams, in 2-percent solution were used, the course consisting of ten to twelve injections.

The results obtained in this series substantiate the reports of other clinicians. Youmans is of the opinion that the results obtained by the use of o-iodoxybenzoic acid (amiodoxyl), under comparable circumstances, are superior to those obtained with other forms of medical treatment.

RADIUM IN CARCINOMA OF THE BLADDER

Dr. B. S. Barringer, of New York, in *J.A.M.A.*, Feb. 4, 1928 gives the end-results in cases of bladder carcinoma treated by radium prior to 1922, so far as the patients have been traced. Only cases in which the carcinoma arose from the epithelial layer are listed.

There were 20 patients with papillary carcinoma, 15 of whom (75 percent) were cancer-free as long as observed, 11 having remained so for more than five years.

There were 51 patients with infiltrating carcinoma, 18 of whom (35 percent) were cancer-free, 12 having remained so for more

than five years. Many of these infiltrating cases have been very extensive and most of them involved the bladder base.

Radium, in all forms, has been used. Beginning in 1915 with radium tubes in the bladder, and later, in cystoscopic applications, radium seeds, through the open bladder, were first used in 1919. In 1925 the use of gold seeds was taken up, but none of these cases are included in the present reports, although greatly improved results are anticipated in the future..

EFFECT OF EPHEDRINE ON NASAL MUCOUS MEMBRANE

Drs. T. King and C. Y. Pak, of the Peking Union Med. Coll., China, publish in *Chinese J. Physiol.*, Nov. 1927, the results of animal laboratory experiments carried out by them to test the effects of ephedrine on the nasal mucosa. Ephedrine hydrochloride was used.

These investigators have found that:

1.—By intravenous injection of ephedrine hydrochloride solution a strong and sustained constriction of the nasal vessels is produced, which causes a large increase in the volume of the nasal cavity, i.e., shrinkage of the mucosa. The effect is very much longer than that obtained with adrenalin.

2.—Local application of ephedrine hydrochloride solutions causes a marked and prolonged vasoconstriction of the nasal mucous membranes, sustained for more than one hour. A 2-percent solution of ephedrine gives a stronger and more prolonged effect than does a 5-percent cocaine solution.

3.—Ephedrine is absorbed very easily and quickly from the nasal mucous membranes.

4.—A large series of experiments all show that repeated use of ephedrine at close intervals does little or nothing to promote its original beneficial effect upon the nasal tissues. The evidence is rather toward greater conservatism in the amount and frequency of the dosage, because large and repeated doses only tend to produce untoward effects.

The persistent vasoconstrictor effects of ephedrine which have been observed, stated clinically by several writers, have been fully confirmed experimentally, both for topical and intravenous administrations of the drug.

CANCER OF THE UTERUS

The early diagnosis of carcinoma of the uterus is of the highest importance, as help can be given only if the condition is recognized in its incipency.

In *Bul. Chicago M.S.* for Jan. 21, 1928, Dr. Henry Schmitz sets forth some diagnostic points and suggestions for treatment.

Diagnosis is impossible, in the early stages, without a microscopic examination of tissue removed by curettage or biopsy.

If a woman (especially one past forty) has a persistent vaginal discharge, particularly if it is blood-streaked and accompanied by menorrhagia or metrorrhagia, a complete and painstaking examination should be made at once, to determine the presence

of cancer. Persistent itching of the vulva also calls for thorough investigation. Hemorrhage, appearing after the menopause, usually means cancer.

If a physician waits to make a diagnosis until pain, cachexia and putrid discharges are present, the case is hopeless.

To determine operability, a general physical examination, together with careful bimanual palpation and the use of the cystoscope and proctoscope, is necessary. If the tumor is in the cervical canal or body of the uterus, the cervix may appear normal and exploration with the probe and curette are required, with a microscopic examination of the tissues removed.

A tumor the size of a navy bean, on the cervix, with all pelvic structures otherwise normal, indicates localization and permits treatment by surgery or radiation. If there is boggy of the cervical tissues or involvement of other pelvic structures, it is too late for surgery unless the uterus can be pulled down easily, to the introitus, with tenaculum forceps. Treat with x-rays and radium combined.

If the structures are fixed in the pelvis ("frozen pelvis"), the case is hopeless and only palliative and symptomatic treatment are indicated.

Always precede operation by a test of the following four conditions:

1.—Determine the patency of the cervical canal to exclude pyometra. If pyometra exists, dilate the cervical canal and irrigate the uterine cavity with a 2-percent aqueous solution of pyoktanin.

2.—If fever is present, wait 14 days after the temperature has subsided before operating.

3.—Make a test for pathogenic bacteria. If they are present, do not operate.

4.—Determine the presence or absence of complicating diseases or constitutional defects—that is, the poor surgical risk.

In the presence of any one of these conditions operation is useless and contraindicated.

The relation of the degree of histologic malignancy to the prognosis of uterine cancer:

A carcinoma never grows in healthy tissues or organs.

A carcinoma always has a local beginning. A carcinoma does not possess a limiting capsule; it is infiltrating, like the roots of a tree.

A carcinoma probably arises from a subepithelial inflammation which stimulates the epithelial cells to proliferate. The chronic inflammation causes a decrease in the differentiation activity of the epithelial cells which then grow into the depth and become atypical.

High malignancy is shown by cells and nuclei of low differentiation; of irregular shape and size; without secretory function; arranged in solid columns, large or small, with numerous and irregular mitoses, and with hyperchromatism. The extreme degree of these features is pleomorphism.

A tumor evincing a high differentiation, with uniformly sized and shaped cells and nuclei; with few mitoses; with high secre-

tory activity; with a high degree of cell differentiation; and with absence of hyperchromatism indicates low malignancy.

Grade 1 histologic malignancy has shown good end results in 76.97 percent; grade 2 histologic malignancy 42.86 percent; grade 3 histologic malignancy 27.27 per cent; and grade 4 does not show any good end results.

EPINEPHRIN ORALLY

It has generally been admitted that epinephrin has very little or no effect when administered orally.

Dr. Wm. C. Menninger, of Topeka, Kansas, in *Arch. Int. Med.*, Nov., 1927, reviews the literature and reports 28 personal observations on 21 patients to whom epinephrin was administered orally. Of these cases 16 were various forms of hyperthyroidism and in the other cases there was some suggestion of hypothyroidism.

Dr. Menninger finds that, although the oral administration of epinephrin, in man, produces effects which have not as yet been explained in the light of animal experimentation; despite the generally expressed opinion to the contrary, epinephrin is absorbed in the gastro-intestinal tract (other than the mouth and throat) in certain cases. This is evidenced by changes in blood pressure, increased tremor, sweating, abdominal distress and other systemic manifestations of the drug.

ACRIFLAVINE IN GONORRHEA

Dr. J. M. E. Prevost, Director of the Prophylactic Institute of Montreal, in *L'Indépendance Méd.*, Dec. 15, 1927, says that acriflavine in a solution of less than 1:300,000 prevents development of gonococci and penetrates deeply. It is used in solutions of 1:5000, two irrigations being given each day. The solution strength may be increased up to 1:1000 but beyond this it causes pain. It has the disadvantage of staining the linen but it causes all discharges to stop within five to six hours.

TREATMENT OF UTERINE FIBROIDS

Dr. C. Jeff Miller, of New Orleans, reviews the modern conception and treatment of uterine fibroids in *Ohio State M. J.*, November, 1927.

Treatment is not necessarily indicated because a fibroid is present.

Possibly 30 percent of the fibroids encountered in private practice are amenable to irradiation. This is a method exclusively for the gynecologist; neither the general practitioner nor the radiologist possesses the discriminating knowledge of the various pelvic diseases which is essential to a proper selection of cases. The use of radium is seldom the procedure of choice in women under 38 or 40 years of age, and only in exceptional cases should it be used in growths larger than a three or three and a half months' pregnancy.

In myomectomy, as in irradiation, the selection of cases is the turning point of success or failure.

Hysterectomy is the only rational procedure in the majority of cases of fibroids, and the author performs this operation in 98 percent of all his patients (colored women). The complete and the supravaginal operation carry practically the same mortality rates, but the latter is a safer procedure for the occasional or inexperienced operator.

A PORCH TENT

Not all tuberculous patients can go to sanatoriums. In the first place there are not enough beds in such institutions; and then again, not all patients can leave home or bear the necessary expense.

Open air sleeping is one of the necessary features in the treatment of tuberculosis, and in an article dealing with the home treatment of this disease, in *Bul. Chicago, Municip. Tuberc., San.* for September—



Cheap, comfortable and well arranged porch tent devised by a patient.

October, 1927, Dr. Benjamin Goldberg describes a porch tent for outdoor sleeping which seems to be within the reach of everyone. He considers this the cheapest, most comfortable and best arranged outdoor sleeping equipment.

The wooden framework, made of 1x2 inch pine, costing at any lumber yard about fifty cents, it built up around a standard iron cot. The tent is dropped over this framework. It is enclosed on all but one side, which side has a large roller curtain, four feet in length, which can be raised or lowered as weather conditions indicate.

This may be set up on a porch or roof (in the cities) and used the year round.

COFFEE

Coffee is undoubtedly the most widely used dietary beverage in America.

From a research on the hygienic aspects of coffee made by R. R. Irvin, of the Mellon Institute of Industrial Research, Univer-

sity of Pittsburgh, in *M. J. & Record*, Oct. 5 and 19 and Nov. 2, 1927, it would appear that the majority of writers on coffee have failed to find it noticeably harmful for the normal adult, when taken in moderate amounts.

Both the young and aged should avoid the use of coffee.

Coffee, to the extent taken by the average person, has not been shown to produce definite pathologic changes in the heart and blood vessels. The evidence seems to be against it as a factor in arteriosclerosis. On account of its strong stimulating cardiac effect its use should be prohibited in heart disease.

The most pronounced physiologic action of coffee (cafein) is as a diuretic; but that its continued use injures the kidneys has not been proved.

Coffee relieves both mental and physical fatigue; its abuse leads to nervousness and insomnia; it stimulates respiration and speeds up metabolism; in ordinary amounts it probably has no harmful effects on digestion. Caffein is rapidly oxidized in the body and under ordinary dosage has no accumulative effect.

WATCH-STRAP DERMATITIS

A case of watch-strap dermatitis in a woman of 24 years, is reported by H. Goodman, of New York, in *Urol. & Cut. Rev.*, October, 1927. The dermatitis extended up the forearm and was first noticed on the left wrist where the strap had usually been worn. Then, when the strap was transferred to the right wrist, the dermatitis appeared there.

MECHANISM OF NONSPECIFIC THERAPY

In the *N. Y. State J. M.*, Dec. 1, 1926, Dr. Maurice, J. Levi discusses the ways in which nonspecific substances, introduced into the body parenterally, produce the beneficial effects which are frequently observed.

A nonspecific agent injected into the body for therapeutic purposes should not contain toxic substances which must be eliminated by the body. Their elimination places an extra burden upon the defensive resources of the system. In the use of non-toxic proteins, no clinical manifestations of a reaction (fever, chills, nausea) occur, either in healthy or diseased individuals. Both the involuntary nervous system and the bone marrow system are influenced. The former carries the stimulus to all the organs and tissues. But only those areas react in which inflammation exists, and in these the vascular dilation already present is augmented. This, in addition to the effect upon the bone marrow system, leads clinically to a focal reaction at the site of the infection and also brings about an increase of all symptoms, thus demonstrating the incidence of a fortified resistance—i.e., formation of leukocytes and antibodies, followed by destruction of germs and rehabilitation of tissues.

In every infection a reaction, whereby the physiologic functions of resistance are strengthened, takes place. If it can be increased by therapeutic measures, these become useful in the treatment of local and general infections. It is important to bear in mind that nonspecific protein therapy is indicated solely in infections and that it acts only by increasing the inherent body resistance.

HISTORICAL METHOD OF TEACHING CLINICAL MEDICINE

In *Bull. Assn. Am. Med. Colleges*, July, 1927, Dr. C. P. Emerson, of the Indiana University School of Medicine, shows that a short course in historical medicine brings out matters of great value to the clinical medicine of today.

The medicine of ancient Egypt was good before it became dominated by the priests, who killed medicine by standardizing it.

Babylonian medicine showed the evil effect of too much regulative legislation in strangling free medical practice.

Jewish medicine, which taught that disease resulted from sin, is not so far removed from the truth as we may think, and many of our medical practices today are based on the same idea, differently expressed.

The study of Greek medicine—the medicine of Hippocrates—shows the excellence that can be attained by individual development. The principles underlying the Greek system are applicable today in matters like laboratory and clinical diagnosis. The real physician cannot divide his responsibility to his patients with others, though they may help him.

Medical practice is largely a reflection of the culture of its age. In the Dark Ages, theology ruled and it stated that the body should be reviled in order that the spirit may be uplifted. Although this was not "good" medicine, yet it illustrated coeval culture; our medicine of today, with its tendency to organization, specialization and excessive instrumentation, is a reflection of our age culture, and there are many aspects in which it is not good "clinical" medicine.

TUBERCULIN IN PHLYCTENULAR KERATOCONJUNCTIVITIS

In *Am. J. Dis. Child.*, Nov., 1927, Dr. H. Casparis, of Nashville, Tenn., considers that a tuberculous focus somewhere in the body is the underlying etiologic factor in phlyctenular keratoconjunctivitis; patients with the disease are hypersensitive to tuberculin, as verified in all the author's cases.

Treatment is by desensitization to tuberculin. Old tuberculin is used and the first dose is much smaller than that which will produce a demonstrable reaction, being then gradually increased to 5 mg., given subcutaneously, every third day.

In all except one or two (in whom there was marked blepharospasm) of 18 patients treated, most symptoms disappeared before

four injections of a 1:1,000,000 dilution were completed. In every case, complete disappearance of symptoms and signs (except scars) was obtained as desensitization proceeded. At the end of the treatment a tuberculin test gave but a very slight reaction. There was but one recurrence after seven months, in a child of 2 years, exposed at home to open tuberculosis. This was ended on re-injection.

LIVER COCKTAIL FOR PERNICIOUS ANEMIA

The efficacy of raw liver diet in pernicious anemia seems established, but it is difficult to make it palatable. In *J.A.M.A.*, Sept. 17, 1927, Dr. W. T. Wilkins, of Piqua, O., gives the following formula for a liver cocktail:

Remove the "skin" around the edges of the liver as received from butcher; carefully remove all veins and tough parts with a sharp knife; rinse in cold water; put through meat grinder twice, using the finest cutter. Then place on ice.

Prepare a sauce as follows:

Tomato catsup (Heinz).....	½ cup
Lemon juice	¼ cup
Worcestershire sauce	2 teaspoonfuls
Chives (finely chopped).....	½ teaspoonful
Salt and pepper.....	to taste

Mix the liver and sauce in the proportion of one part crushed liver to two and a half parts of sauce. Chill thoroughly and serve in a cocktail glass with crackers.

Dr. Wilkins says that the dish has proved acceptable to epicures. Only small portions should be served at first until a taste has been acquired.

INTENSIVE ALKALINE TREATMENT OF PEPTIC ULCERS

In *Lancet*, Jan. 7, 1928, Drs. H. MacLean, I. Jones and G. Fildes, of St. Thomas' Hospital, London, publish the results of 5 years' study of intensive alkaline treatment of gastric and duodenal ulcers.

The basis of this treatment is that ulcer is due to the continuation of acid secretion after digestion has been completed and the food left the stomach; that such acidity prevents the healing of existing ulcers; that ulcers should heal when the deleterious effects of acid secretion were stopped.

The authors use a powder of the following composition:

Sodium Bicarbonate	1 part
Magnesium Carbonate (powd.).....	2 parts
Bismuth Oxycarbonate	2 parts

A cheaper but almost equally effective powder can be prepared thus:

Bismuth Oxycarbonate	1 part
Sodium Bicarbonate	3 parts
Magnesium Carbonate (powd.).....	3 parts
Creta preparata	3 parts

The patient is kept thoroughly saturated with the alkaline mixture. For the first week a fluid diet (milk and Benger's food) only is given. A teaspoonful of the powder

is taken every two hours, shortly after the milk. About six or seven doses are given during the day and, if the patient wakes during the night, he should have a dose handy and take it. The dose just before retiring should be a double dose.

During the second week the powder is reduced to 4 or 5 doses a day and the diet includes toast, butter, eggs, custard and cream.

During the third week the powder is reduced further, and cereals, a little white fish and a little potato are added to the diet.

By the fifth week the patient is on a general diet, but only a little meat should be taken. The ulcer should now be healed or well on its way and the symptoms should have disappeared. The powder should be continued a few times a day for another six weeks.

By this treatment the authors have had most gratifying results, to which a number of case histories published testify. They are convinced, after 5 years trial, that this is a simple, successful method for curing gastric and duodenal ulceration which has not reached the complicated stage when surgery is essential.

PARATHYROID EXTRACT IN EDEMA

In *J.A.M.A.*, Jan. 28, 1928, Dr. Wm. S. McCann, of Rochester, N. Y., reports the cases of three patients with generalized edema and nephritis (2 also had hypocalcemia) in which the administration of parathyroid extract (Collip) initiated a diuresis of water and salt lasting several days after the transient elevation of the blood serum calcium.

A few somewhat similar cases are reported in the literature.

The mechanism of the action calls for further investigation. No clear evidence of diuresis has yet been obtained when parathyroid has been given to nonedematous subjects.

PERSPIRATION

In an interesting article in the *Presse Méd.*, of Paris, Jan. 18, 1928, Dr. Jean Meyer says that but little clinical attention is given to the cutaneo-pulmonary elimination of water, compared to urinary elimination.

Pulmonary evaporation runs from about 200 to 400 Gm. per day; cutaneous perspiration (including insensible perspiration) averages about 100 Gm. per day.

Meyer says that the cutaneous elimination of water varies considerably in different pathologic conditions. An interesting observation is to the effect that edema is one of the fundamental symptoms of eczema and is usually associated with an increased weight. Such patients, if placed on a milk diet (1½ to 2 quarts a day), may lose 2 to 3 kilograms of body weight in a couple of days by cutaneous elimination, and pruritus is diminished. It is possible to maintain

the loss of weight obtained on a salt-free diet, but if the patient resumes his normal diet he regains his former weight.

In the intervals of eczematous exacerbations, patients may lose 1 or 2 kilograms of weight if they submit to a milk diet for a couple of days. Eczematous patients are very prone to great variations in the degree of cutaneous elimination of water.

DEXTROSE IN THE CONTROL OF OBESITY

In *Am. J. M. Sc.*, Jan., 1928, Drs. B. Gordon and E. von Stanley, of Philadelphia, report their results in an experimental dietary study of a series of obese patients.

In one series the total customary caloric intake of the patients (1800 to 3000 calories) was rearranged so that the carbohydrate portion was administered between meals as dextrose candy.

In about half the cases an average weekly loss of 1.5 Kg. was noted, which suggested that under the terms of the experiment the dextrose was largely utilized as fuel.

In a second series, a diet of between 1100 and 1400 calories, derived largely from fat and protein, was administered at meal time. In addition, dextrose candy (100 to 150 calories) was given between meals, usually during exercise, fatigue or weakness. A fairly constant loss of weight occurred in this series without untoward effect or discomfort to the patients.

It appears that weight loss was, to a considerable extent, due to moderate starvation at meal time, the dextrose being used principally to relieve symptoms and to supply energy during effort.

TEST FOR SUGAR IN URINE

Present-day medical developments have made frequent sugar tests of the urine necessary. The methods in use are cumbersome for the general practitioner. Dr. A. G. Sheftel, in *M. J. & Record*, Dec. 7, 1927, describes a simplified practical method, a color test which requires only a special graduated dropper, charts of different shades of green, each corresponding to a definite percentage of sugar, and two reagents.

Reagent No. 1 consists of:

	Grams or cc.
Copper sulphate	25.00
Sodium citrate	250.00
Sodium carbonate (anhydrous).....	150.00
Acacia (10-percent solution).....	4.00
Distilled water to make.....	1000.00

Reagent No. 2:

Creatinine (0.4-percent solution).....	10.00
Acacia (10-percent solution).....	10.00

The test depends upon the fact that a given amount of glucose will always produce the same amount of yellow cuprous oxide and that a fixed amount of blue copper sulphate, mixed with varying amounts of yellow cuprous oxide (to which the sulphate is reduced by urine), will give differ-

ent shades of green, a scale of which can be made.



Special dropper with two divisions for measuring urine and reagents.

The technic of the test is as follows: To 5 cc. of reagent No. 1 in a test tube, add 0.5 cc. of urine, measured by the dropper. Heat the solution in boiling water for five minutes, let it cool and shake well. If there is no cloudiness and no change in the original blue color, there is no sugar; but if the solution becomes opaque and changes color, there is sugar present.

To determine the amount of sugar the test tube should be compared with the color scale chart.

A reddish shade of color indicates a high percentage of sugar. In this case, take again 5 cc. of reagent No. 1 and add 0.012 cc. of urine and 0.012 cc. of reagent No. 2, which makes the cuprous oxide yellow instead of red. Heat and cool as before and compare with color chart, which should correspond with sugar percentage of from 1/10 to 8 percent.

METASTASIZING OVARIAN CARCINOMA TREATED BY TRANSFUSION AND RADIATED ASCITIC FLUID

In *Proc. Royal Soc. Med.* (Section of Obst. and Gynecol.) 1927, page 407, Dr. H. B. Whitehouse presents a report of a case of bilateral carcinoma of the ovaries, with metastases in the peritoneum, which showed a favorable result from surgery and treatment with blood and ascitic fluid.

Both ovaries were surgically removed and the ascitic fluid in the abdomen was collected in a sterile vessel. Over 1,000 cc. of this fluid, 100 mgm. of radium was suspended for 24 hours.

The patient was transfused with one pint of blood from a healthy woman at the tenth week of pregnancy.

Eighteen days after the operation, injections of 10 cc. of the irradiated ascitic fluid were given twice a week until 500 cc. had been injected. Most of the injections were followed by a febrile reaction.

The ascites did not recur; the metastatic masses in the abdomen have disappeared; and the patient's general condition has improved.

DIFFUSE ALOPECIA

Dr. R. Sabouraud, Paris, France, in *Urol. & Cut. Rev.*, October, 1927, states that the hair falls out about three months after a severe infectious disease but that in such cases the prognosis for spontaneous re-growth is favorable.

A traumatic shock after an abdominal operation is usually followed for many months by very severe alopecia, even though

four injections of a 1:1,000,000 dilution were completed. In every case, complete disappearance of symptoms and signs (except scars) was obtained as desensitization proceeded. At the end of the treatment a tuberculin test gave but a very slight reaction. There was but one recurrence after seven months, in a child of 2 years, exposed at home to open tuberculosis. This was ended on re-injection.

LIVER COCKTAIL FOR PERNICIOUS ANEMIA

The efficacy of raw liver diet in pernicious anemia seems established, but it is difficult to make it palatable. In *J.A.M.A.*, Sept. 17, 1927, Dr. W. T. Wilkins, of Piqua, O., gives the following formula for a liver cocktail:

Remove the "skin" around the edges of the liver as received from butcher; carefully remove all veins and tough parts with a sharp knife; rinse in cold water; put through meat grinder twice, using the finest cutter. Then place on ice.

Prepare a sauce as follows:

Tomato catsup (Heinz).....	$\frac{1}{2}$ cup
Lemon juice	$\frac{1}{4}$ cup
Worcestershire sauce	2 teaspoonfuls
Chives (finely chopped).....	$\frac{1}{2}$ teaspoonful
Salt and pepper.....	to taste

Mix the liver and sauce in the proportion of one part crushed liver to two and a half parts of sauce. Chill thoroughly and serve in a cocktail glass with crackers.

Dr. Wilkins says that the dish has proved acceptable to epicures. Only small portions should be served at first until a taste has been acquired.

INTENSIVE ALKALINE TREATMENT OF PEPTIC ULCERS

In *Lancet*, Jan. 7, 1928, Drs. H. MacLean, I. Jones and G. Fildes, of St. Thomas' Hospital, London, publish the results of 5 years' study of intensive alkaline treatment of gastric and duodenal ulcers.

The basis of this treatment is that ulcer is due to the continuation of acid secretion after digestion has been completed and the food left the stomach; that such acidity prevents the healing of existing ulcers; that ulcers should heal when the deleterious effects of acid secretion were stopped.

The authors use a powder of the following composition:

Sodium Bicarbonate	1 part
Magnesium Carbonate (powd.).....	2 parts
Bismuth Oxycarbonate	2 parts
A cheaper but almost equally effective powder can be prepared thus:	
Bismuth Oxycarbonate	1 part
Sodium Bicarbonate	3 parts
Magnesium Carbonate (powd.).....	3 parts
Creta preparata	3 parts

The patient is kept thoroughly saturated with the alkaline mixture. For the first week a fluid diet (milk and Benger's food) only is given. A teaspoonful of the powder

is taken every two hours, shortly after the milk. About six or seven doses are given during the day and, if the patient wakes during the night, he should have a dose handy and take it. The dose just before retiring should be a double dose.

During the second week the powder is reduced to 4 or 5 doses a day and the diet includes toast, butter, eggs, custard and cream.

During the third week the powder is reduced further, and cereals, a little white fish and a little potato are added to the diet.

By the fifth week the patient is on a general diet, but only a little meat should be taken. The ulcer should now be healed or well on its way and the symptoms should have disappeared. The powder should be continued a few times a day for another six weeks.

By this treatment the authors have had most gratifying results, to which a number of case histories published testify. They are convinced, after 5 years trial, that this is a simple, successful method for curing gastric and duodenal ulceration which has not reached the complicated stage when surgery is essential.

PARATHYROID EXTRACT IN EDEMA

In *J.A.M.A.*, Jan. 28, 1928, Dr. Wm. S. McCann, of Rochester, N. Y., reports the cases of three patients with generalized edema and nephritis (2 also had hypocalcemia) in which the administration of parathyroid extract (Collip) initiated a diuresis of water and salt lasting several days after the transient elevation of the blood serum calcium.

A few somewhat similar cases are reported in the literature.

The mechanism of the action calls for further investigation. No clear evidence of diuresis has yet been obtained when parathyroid has been given to nonedematous subjects.

PERSPIRATION

In an interesting article in the *Presse Méd.*, of Paris, Jan. 18, 1928, Dr. Jean Meyer says that but little clinical attention is given to the cutaneo-pulmonary elimination of water, compared to urinary elimination.

Pulmonary evaporation runs from about 200 to 400 Gm. per day; cutaneous perspiration (including insensible perspiration) averages about 100 Gm. per day.

Meyer says that the cutaneous elimination of water varies considerably in different pathologic conditions. An interesting observation is to the effect that edema is one of the fundamental symptoms of eczema and is usually associated with an increased weight. Such patients, if placed on a milk diet ($1\frac{1}{2}$ to 2 quarts a day), may lose 2 to 3 kilograms of body weight in a couple of days by cutaneous elimination, and pruritus is diminished. It is possible to maintain

the loss of weight obtained on a salt-free diet, but if the patient resumes his normal diet he regains his former weight.

In the intervals of eczematous exacerbations, patients may lose 1 or 2 kilograms of weight if they submit to a milk diet for a couple of days. Eczematous patients are very prone to great variations in the degree of cutaneous elimination of water.

DEXTROSE IN THE CONTROL OF OBESITY

In *Am. J. M. Sc.*, Jan., 1928, Drs. B. Gordon and E. von Stanley, of Philadelphia, report their results in an experimental dietary study of a series of obese patients.

In one series the total customary caloric intake of the patients (1800 to 3000 calories) was rearranged so that the carbohydrate portion was administered between meals as dextrose candy.

In about half the cases an average weekly loss of 1.5 Kg. was noted, which suggested that under the terms of the experiment the dextrose was largely utilized as fuel.

In a second series, a diet of between 1100 and 1400 calories, derived largely from fat and protein, was administered at meal time. In addition, dextrose candy (100 to 150 calories) was given between meals, usually during exercise, fatigue or weakness. A fairly constant loss of weight occurred in this series without untoward effect or discomfort to the patients.

It appears that weight loss was, to a considerable extent, due to moderate starvation at meal time, the dextrose being used principally to relieve symptoms and to supply energy during effort.

TEST FOR SUGAR IN URINE

Present-day medical developments have made frequent sugar tests of the urine necessary. The methods in use are cumbersome for the general practitioner. Dr. A. G. Sheftel, in *M. J. & Record*, Dec. 7, 1927, describes a simplified practical method, a color test which requires only a special graduated dropper, charts of different shades of green, each corresponding to a definite percentage of sugar, and two reagents.

Reagent No. 1 consists of:

	Grams or cc.
Copper sulphate	25.00
Sodium citrate	250.00
Sodium carbonate (anhydrous).....	150.00
Acacia (10-percent solution).....	4.00
Distilled water to make.....	1000.00

Reagent No. 2:

Creatinine (0.4-percent solution).....	10.00
Acacia (10-percent solution).....	10.00

The test depends upon the fact that a given amount of glucose will always produce the same amount of yellow cuprous oxide and that a fixed amount of blue copper sulphate, mixed with varying amounts of yellow cuprous oxide (to which the sulphate is reduced by urine), will give differ-

ent shades of green, a scale of which can be made.



Special dropper with two divisions for measuring urine and reagents.

The technic of the test is as follows: To 5 cc. of reagent No. 1 in a test tube, add 0.5 cc. of urine, measured by the dropper. Heat the solution in boiling water for five minutes, let it cool and shake well. If there is no cloudiness and no change in the original blue color, there is no sugar; but if the solution becomes opaque and changes color, there is sugar present.

To determine the amount of sugar the test tube should be compared with the color scale chart.

A reddish shade of color indicates a high percentage of sugar. In this case, take again 5 cc. of reagent No. 1 and add 0.012 cc. of urine and 0.012 cc. of reagent No. 2, which makes the cuprous oxide yellow instead of red. Heat and cool as before and compare with color chart, which should correspond with sugar percentage of from 1/10 to 8 percent.

METASTASIZING OVARIAN CARCINOMA TREATED BY TRANSFUSION AND RADIATED ASCITIC FLUID

In *Proc. Royal Soc. Med.* (Section of Obst. and Gynecol.) 1927, page 407, Dr. H. B. Whitehouse presents a report of a case of bilateral carcinoma of the ovaries, with metastases in the peritoneum, which showed a favorable result from surgery and treatment with blood and ascitic fluid.

Both ovaries were surgically removed and the ascitic fluid in the abdomen was collected in a sterile vessel. Over 1,000 cc. of this fluid, 100 mgm. of radium was suspended for 24 hours.

The patient was transfused with one pint of blood from a healthy woman at the tenth week of pregnancy.

Eighteen days after the operation, injections of 10 cc. of the irradiated ascitic fluid were given twice a week until 500 cc. had been injected. Most of the injections were followed by a febrile reaction.

The ascites did not recur; the metastatic masses in the abdomen have disappeared; and the patient's general condition has improved.

DIFFUSE ALOPECIA

Dr. R. Sabouraud, Paris, France, in *Urol. & Cut. Rev.*, October, 1927, states that the hair falls out about three months after a severe infectious disease but that in such cases the prognosis for spontaneous re-growth is favorable.

A traumatic shock after an abdominal operation is usually followed for many months by very severe alopecia, even though

the shock may not be followed by fever. But Sabouraud has never seen a patient without fever suffer from alopecia in the absence of syphilis. Ordinarily the alopecia of syphilis is not diffuse; it affects very small areas in which the loss of hair is incomplete.

Diffuse alopecia, according to Sabouraud, depends upon seborrhea, which is a bacterial disease that does not appear in either sex until after the period of puberty. Seborrheic alopecia manifests itself differently in both sexes; only men become bald; women who lose their hair do not become entirely bald.

The treatment of seborrheic alopecia can at present be symptomatic only, and sulphur is the only agent that is efficacious. Sabouraud gives a number of prescriptions—but only a marked lessening of the falling of the hair can be expected.

NITROHYDROCHLORIC ACID IN HAY FEVER

The oral use of nitrohydrochloric acid for hay fever has been known since 1893, but for several reasons, was limited. Dr. H. Beckman, Milwaukee, in *Am. J. M. Sc.*, Oct., 1927, has used it with what he terms astounding results in 17 cases.

The formula and dosage used are as follows:

Acid nitrohydrochl. (not the dilute) 3ivss (18.0)
Aq. dest. q.s. ad. 3iv (120.0)

Dose: One teaspoonful, in 2/3 glass of water, followed by another glass of water, after each meal and again upon retiring (as near midnight as possible).

This prescription is in no sense dangerous but the use of laxatives or purgatives should be avoided.

All the author's 17 patients obtained practically complete freedom from distress by beginning the ingestion of the acid at once on the appearance of the first premonitory symptoms and continuing its use, four times daily, throughout their particular "season".

HOPE FOR THE DEAF

In the *Eye, Ear, Nose and Throat Monthly*, Oct. 1927, Dr. Harold Hays, of New York, writes an article on the awakening of the otologist in his attitude towards the deafened.

Much of the progress of recent years has been accomplished by the association of otologists with lay societies bound together in the American Federation of Organizations for the Hard of Hearing.

In the majority of cases, deafness begins in childhood, becomes progressively worse, and interstitial changes take place which it is impossible to overcome. In a period of 8 years, in the author's Clinic, it was possible to improve or cure over 50 percent of 500 children treated, and the same can

be accomplished all over the country if otologists see their duty and do it.

A survey of school children in New York City showed that 14.2 per cent of the children suffered from defective hearing.

The active work pursued includes the extension of the study of lip-reading, audiometer tests, the thorough investigation of otosclerosis, and the elimination of useless and delusive methods of treatment. The future work of otologists will be mainly concerned with making a defective middle ear function usefully.

URTICARIA

According to Dr. H. C. Lindsay, of Pasadena, California, in *Urol. & Cutan. Rev.*, Oct., 1927, most cases of urticaria are treated empirically. The great majority of cases are due to an anaphylaxis or allergic reaction, and an effort to rid the intestinal tract of an offending substance is quite proper.

External treatment of urticaria is not only palliative but it materially assists in the cure and should be carried on with the internal treatment as the one enhances the other.

The rational treatment of urticaria is being gradually perfected. The larger number of drugs used for its treatment can be classified as intestinal antiseptics, antacids, hematinics, blood sterilizers and thickeners or coagulators. These drugs are not sufficient to cover the requirements of the reflex nervous cases, the cases suffering from endocrine anomalies, obscure metabolic deflections, vaccine or drug rashes, nor toxic cases due to renal complications, bladder trouble, etc. However, what has long been considered empiric treatment now seems more rational.

CHAULMOOGRA OIL IN TUBERCULOUS LARYNGITIS

Since 1921, several writers have reported satisfactory results from the use of chaulmoogra oil in cases of tuberculous laryngitis.

In *J. Michigan M. Soc.*, Dec., 1927, Dr. C. F. Snapp, of Grand Rapids, reports his results in 25 cases so treated. A 20-percent solution of chaulmoogra oil in olive oil was used in practically all cases. One cc. of the solution was drawn into a laryngeal syringe and, with the aid of a laryngeal mirror, with the patient holding his own tongue, the oil was injected on and into the larynx. If the epiglottis is involved some of the oil is dropped on it, as well as on the arytenoids and the posterior wall; also on the vocal cords.

The treatments are given 3 times a week, but later may be reduced to twice or even once a week.

No deleterious effects were observed in any of the author's cases.

Dysphagia has been controlled in practically every instance. Pain and ulceration are relieved. The majority of the

patients were definitely improved and a small percentage cured.

Chaulmoogra oil is not a specific and should not replace other methods of treatment, but it has great value in the relief of pain and dysphagia and the author's findings confirm those of other writers in this respect.

A DOUBLE SET OF PELVIC ORGANS

In *J.A.M.A.* for Feb. 11, 1928, Dr. William A. Hinkle, of Peoria, Ill., reports the case of a woman who had two vaginas, uteri, rectums, colons and urinary bladders. The organs on the left side were sufficiently complete to function.

The patient was alive and well at the age of 62 years; had been twice married (coitus was performed in the left vagina); and her one pregnancy had resulted in a miscarriage of twins at the third month.

MILK INJECTIONS IN PELVIC INFECTIONS

Dr. L. E. Burch, Nashville, Tenn., in *J. A. M. A.*, Jan. 21, 1928, describes an operation in which the anterior lip of the cervix is incised and a germicide applied to the endocervix. Following the operation, fat-free boiled milk is injected in the gluteal region; 5 cc. is the initial dose; 7 cc. is given the third day; 10 cc. the sixth day and 10 cc. every third day thereafter.

Milk has been a decided help in the treatment; 311 injections were given with only one abscess. Five patients with obstructive dysmenorrhea were relieved. There was 1 case of gonorrheal tenosynovitis. This quickly disappeared with the elimination of the focus of infection. The same result was accomplished in 3 cases of gonorrheal rheumatism.

This mode of treatment removes infection without the necessity of mutilating operations, especially in gonorrheal pelvic infections.

INTRAVENOUS DEXTROSE (GLUCOSE) ADMINISTRATION

Glucose (dextrose) is known to furnish calories, allay nausea, especially that due to uremia, spare protein and help to complete the combustion of fats. Hence the great value of intravenous glucose medication in cases of uremia or toxemia. Other qualities are the stimulating action upon the heart and the tendency to prevent dehydration.

As some practitioners have reported rather severe reactions following the use of intravenously administered glucose, Drs. W. E. Robertson, A. E. Oliensis and D. Stein, of the Samaritan Hospital, Philadelphia, undertook a study of the causes of these reactions, the study covering a period of two years. The results are reported in *M. J. & Record*, Dec. 7, 1927.

Their general findings show that the in-

travenous injection of concentrated glucose solution is a safe and valuable method of combating uremia and toxemia; especially when associated with acidosis and azotemia. Sixty-percent glucose concentration gave a smaller percentage of reactions than did 10 to 20 percent concentration.

A severely impaired cardiovascular system is no contraindication to the use of concentrated solutions.

Untoward reactions are due to the rapid rate of injection, the large volume of fluid, distilled water and improper temperature of solution, which latter should be at body temperature.

The most recent series of injections given by the authors (all adverse factors having been eliminated) have been free from any reactions.

LACTIGEN IN THROAT INFECTIONS

In *Eye, Ear, Nose & Throat Monthly*, Nov., 1927, Dr. C. B. Williams reports that he has been using parenteral milk injections in throat infections for the past four years with excellent results.

Sterile milk was at first used, injected into the subcutaneous fat of the abdomen, but latterly Abbott's Lactigen has proved quite satisfactory and has simplified the technic considerably.

Of 8 cases of post-tonsillectomy infection, 6 were promptly and definitely relieved.

In 9 of 11 cases of peritonsillar infections, there were "truly spectacular results."

To get the best results, early diagnosis and early use of milk is imperative. In these the results often seem miraculous, especially in postoperative infections.

"BEAUTY" SHOPS AND THE MEDICAL PROFESSION

An editorial in *Am. Med.*, Nov. 1927, under the caption of *The Ugliness of Beauty*, calls attention to the vast increase in the number of so-called beauty shops and in the business of preparing beauty nostrums. The writer considers this as the commercial exploitation of the fundamental urge in women to render the person beautiful at any cost.

While there can be no doubt that the beauty business is being overdone to an alarming extent, one point that the writer makes appears to concern the medical profession particularly; namely, that these shops or emporiums and the practices carried on in them are subject to little if any supervision. True beauty, in the last analysis, is the expression of health. The unscrupulous and ignorant use of various chemical and other processes, under the guise of promoting beauty, may be extremely detrimental to health.

It should not be an act beneath the dignity and office of a physician to warn patients of the possible dangers that lie in so-called beauty procedures; and those who

are the guardians of public health should be satisfied as regards the qualifications and methods of those who style themselves beauty specialists.

LENS-ANTIGEN TREATMENT OF CATARACT

The use of specific protein therapy in eye diseases is of comparatively recent date.

In *Am. Med.*, June, 1926, Dr. A. E. Davis, of New York City, reports that he has used lens-antigen during the past five years in more than 250 human incipient cataract cases. The lens-antigen is mostly prepared from beef eyes and the extract is injected subcutaneously in the upper arm. An injection is given every day for about 50 days, dosage being progressively increased.

Lens-antigen, though used mostly for the prevention of the development of cataract, is most effective in the ordinary senile, subcapsular cataract and has little or no effect in the nuclear type.

All presbyopic patients should be carefully examined for the signs of incipient cataract and, if these are found, the lens-antigen treatment should be begun. Vision, the author claims, can be kept normal in 85 percent of cases started on lens-antigen treatment in the early stages of cataract.

INDICATIONS FOR CESAREAN SECTION

Dr. Gilbert Fitz-Patrick, of Chicago, in *Illinois M. J.*, Dec., 1927, expresses his opinion that, throughout the country generally, cesarean section is being performed too extensively and, in perhaps the majority of cases, not only without strict obstetric indications, but rather with far-fetched indications.

The reasons are, according to Dr. Fitz-Patrick, the comparative ease and low mortality of the operation, in the hands of the competent surgeon; the fact that the teach-

ing and practice of obstetrics is lagging behind and that there are comparatively few men competent to perform the more difficult obstetric maneuvers and operations; and, finally, that the cesarean operation is being openly recommended and exploited by a certain class of surgeons, principally from commercial considerations.

Dr. Fitz-Patrick considers that, even if a woman desires to be spared (as she may believe) the pangs of labor pains, the rights of the husband and of the state should be considered and the woman not deliberately exposed to the risk of being rendered inefficient in the future production of children and citizens.

CALCIUM AND NERVOUS DISORDERS

Irritability of the living cell is probably an important factor in the etiology of functional nervous disorders. An increase of sodium, potassium or hydroxyl ions or a decrease of calcium can produce cellular irritation. In *Minnesota Med.*, Dec., 1927, Dr. Chas. C. Gault reports the results of prolonged calcium administration to 18 highly nervous patients in whom organic disease could be excluded. Each of these was given 20 grains of calcium lactate orally, four times daily, for a period lasting from 3 to 6 months without any other medication or treatment.

The results were quite uniform. Within 24 to 48 hours the patient experienced a feeling of mental well-being, nervousness and apprehension disappeared and the feeling of fatigue was replaced by a sensation of physical fitness. The appetite and sleep were improved, and in cases where the patients had suffered from dull occipital headaches these did not recur.

Dr. Gault believes that these cases demonstrate that serious consideration of the calcium metabolism may be of definite value in the milder neuroses.

The basis of the treatment is that continuous calcium feeding can raise the level of the blood serum calcium.

Though you live three thousand years, or as many myriads, remember this; that no man can throw away any other life than that he is now living, nor live any other life than that he is now throwing away.—Marcus Aurelius.

Hitherto we have recognized a trinity of agencies, namely, the Church, the home and the school, as fundamental and essential. Added to these today, and next in order are the playgrounds and recreational centers.—Bishop James E. Freeman.

New Books

WYARD: DISEASES OF THE STOMACH

A HANDBOOK OF DISEASES OF THE STOMACH. By Stanley Wyard, M.D., B.S., M.R.C.P., Physician to the Bolingbroke Hospital and the Victoria Hospital for Children; Assistant Physician to the Cancer Hospital. London and New York: Humphrey Milford, Oxford University Press. 1927. Price \$5.00.

This is a concise and very practical manual on diseases of the stomach, which can be recommended for the use of clinicians and general practitioners.

The author approaches his subject from the clinical aspects. While he admits that much may be learned from various tests, yet too great reliance must not be placed upon them, owing to the many variations of conditions in individual patients; this means that no deduction can be made with certainty from tests and that judicial acumen must be exercised in interpreting them in the light of the general study of the patient.

In the chapter on gastric ulcer, while the author, as a general rule, favors surgery, this should only be regarded as the prelude to systematic medical treatment.

The thirteen chapters in the volume cover all the commoner stomach diseases likely to be met in general practice.

While there is nothing essentially new in the book, yet the subjects dealt with are handled in a sane and temperate manner, and the author's opinions are, to a great extent, based on his own experience rather than on stereotyped views.

A useful and interesting addition to any medical library.

ANDERSON: MALARIAL PSYCHOSES

MALARIAL PSYCHOSES AND NEUROSES. With Chapters Medico-Legal, and on History, Race Degeneration, Alcohol, and Surgery in Relation to Malaria. By William K. Anderson, M.D., F.R.C.P.S. (Glas.), Visiting Physician to the Eastern District Hospital, Duke Street, Glasgow, etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$13.00.

This is one of those books which strike a reviewer as being eminently worth while, not merely on account of the intrinsic value of the subject treated, but because the book gives internal evidence of a vast amount of painstaking and scholarly research in a field which, up to now, has been only very superficially studied.

Dr. Anderson says that there appears to be no existing comprehensive work dealing with the nervous manifestations of

malaria. Perusal of the book, however, shows that there is ample justification for a work dealing with the psychoses due to malarial infection, which include simple confusional states, hallucinations, asthenia with depression, cerebrospinal or peripheral neuritis (malarial general paralysis) melancholia, mania and dementia precox. There is plenty of historical evidence given by the author to show that these have been common in malarious countries, and that a tendency to them was transmissible.

In the United States, malaria is of importance only in parts of the South. It is doubtful if the nervous and psychic sequelae have received much attention. It is possible that the *dolce far niente* which characterizes parts of the South may be directly or indirectly traceable to direct or inherited malarial influences, similar to those referred to by the author in Chapter IV.

A point that may be worth alluding to is that artificially induced malaria has been proposed as a treatment of paresis. While the *Plasmodium vivax* is usually employed for this purpose and produces a benign tertian fever, yet Dr. Anderson does not say that the *Plasmodium falciparum*, which produces a malignant fever, is alone responsible for the production of later effects on the nervous system. According to Anderson (p. 3) the malignant tertian parasite appears to be, on the whole, the most damaging to the tissues, and particularly to the nervous system, but both benign tertian and quartan parasites are capable of doing the same, if with less frequency. These parasites can apparently remain alive in the spleen and affect the blood for long periods, resisting all treatment short of removal of the spleen.

In induced malarial therapy it might be well to pause until the remote effects are better known.

The book is recommended to all those who value fine original work, well done.

COPE: ACUTE ABDOMINAL DISEASE

CLINICAL RESEARCHES IN ACUTE ABDOMINAL DISEASE. By Zachary Cope, B.A., M.D., M.S. (Lond.), F.R.C.S. (Eng.), Senior Surgeon to Out-Patients, St. Mary's Hospital, Paddington, etc. Second Edition. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$3.50.

Apart from the value of the original clinical observations by the author, in connection with acute abdominal disease, this book has a special interest for us because it stresses the value of clinical research—

a matter which is within the scope of every practitioner.

The author notes that formerly the laboratory worker and the pathologist were subservient to the clinician. Then came the phase in which both clinician and laboratory diagnostician stood on an equal footing. Today the author sees a tendency on the part of laboratory workers to occupy the foremost place and push the clinicians into the background.

There are, however, three main purposes for clinical research: It is within the scope of the clinician to test the value of the results achieved in the laboratory; to try various empiric methods and to refer his results to the laboratory for investigation and explanation; and to record clinical facts, with the object of determining some questions which are inaccessible to laboratory methods of study.

There can be little doubt that the pendulum is again swinging toward the just recognition of the value of careful clinical observation in the advancement of medical science, and there should be fuller cooperation between laboratory workers and clinicians in reaching a common end, but the clinician must have the last word.

The present volume shows what good results can be obtained by any general practitioner in original work. The chapters on cutaneous hyperesthesia in acute abdominal disease; on the points of difference between acute thoracic and abdominal lesions; the study of phrenic shoulder pain and the genitourinary symptoms in acute appendicitis are examples of what may be accomplished by careful clinical observation.

Dr. Cope's book is recommended to all general practitioners and every physician who is interested in enlarging the field of medical science through clinical research, as a working manual of how to set about such studies and a clear statement of some of the facts discoverable in this manner. It deserves wide popularity and earnest study.

RUSSELL: ESSAYS

SELECTED PAPERS OF BERTRAND RUSSELL. *Selected and With a Special Introduction by Bertrand Russell.* New York: The Modern Library, Inc. 1927. Price \$0.95.

Bertrand Russell is a philosopher of no mean order, a scholar and a writer who uses the English language in a very satisfying manner. The fact that he is also a socialist, a pacifist and one or two other things which some of us consider more or less undesirable, does not make his writings less stimulating and enjoyable.

The papers contained in this volume have been selected from his rather voluminous and varied writings and are representative of his modes of thought and style of presentation. Among the titles are: A Free Man's Worship, Science and Art Under Socialism, The Aims of Education, Causes of the Present Chaos, Moral Standards and Social Well-Being, and a number of others.

The essay on Mysticism and Logic is particularly well considered and full of meat.

This volume is one of the Modern Library series, all of which are thoroughly worthwhile, and is heartily recommended to those who love a philosophical argument for its own sake.

ABDERHALDEN: PHYSIOLOGY

LEHRBUCH DER PHYSIOLOGIE. IN VORLESUNGEN. (TEXTBOOK OF PHYSIOLOGY. IN LECTURES.) By Emil Abderhalden, Ordinary Public Professor and Director of the Physiologic Institute for the University of Halle. In Four Volumes. Berlin N 24, Friedrichstrasse 105 B: Urban & Schwarzenberg. 1927. Price Mk. 110.

The reviewer is at a loss to express his admiration for this masterpiece without risking the accusation of having lost his judicial calm. But here is a work which no one who takes the profession of medicine seriously can even glance through without being deeply impressed. When we recall the dry and concrete manner in which we obtained our training in physiology, a quarter of a century ago, and compare the ordinary textbook of physiology, of recent date, with these four volumes of revised lectures, one cannot but realize that Medicine today ranks among the foremost naturalistic sciences and that physiology, if it is to be a fundamental discipline, must be not mere physiology, but biology in the fullest sense of the word, including pathologic physiology.

This is a work of 2222 pages of actual text, exclusive of prefaces, tables of contents and indexes, with 773 partly colored illustrations and 24 colored plates.

The text proper is not a mere narration of collected facts, but heart-to-heart talks with an appreciative audience, adequately prepared to follow the leader in his experimental research, so that the work must remain for many years a mine of knowledge, not only to the student, but to the practicing physician and surgeon who has the desire to know the philosophy of animated life and disease.

The internist, the endocrinologist, the nerve specialist, the ophthalmologist, the oto-laryngologist and the surgeon will be more than repaid for a close study of the work, especially of the sections of special interest to each representative of one or the other specialty, because many vexing problems will be found to be elucidated in the light of physiologic and morphologic research, and the man who holds a teaching position in a medical college can ill afford to ignore it.

One need only partly master the German language in order to study these volumes with profit, for German medical literature deals with subjects which are expressed in a language which physicians learn to translate, if not verbatim, at least in the sense implied, rather quickly.

Abderhalden began his first volume (dealing with the functions of the digestive apparatus, the liver and pancreas, with

the activities of the spleen, internal secretions, genital apparatus, heredity and the function of the skin) as a sort of publishing experiment. If there proved to be no demand for the work his masterpiece would have remained locked in his desk. It is to the credit of German medicine that its representatives quickly appreciated the extraordinary merit of the volume and the enthusiasm thus displayed encouraged author and publishers to issue the other three volumes.

The second volume deals with the blood and its circulation, lymph, lymphvessels, respiration, functions of the kidneys and the sympathetic and parasympathetic nervous systems.

The large third volume is devoted to the senses—the colored charts are the best we have seen in American and foreign works on ophthalmology—and the entire work is concluded in the fourth and last volume, dealing with the motor systems, the peripheral nervous system, muscles, reflex systems and the functions of the central nervous system.

The entire work is divided into 91 lectures, each well rounded out and provided with bibliographic references and quotations from other authorities, thus affording the scholars of the world a masterly review of the entire literature on comparative physiology and allied naturalistic sciences.

And yet, the author, though admitting that the work has proved an inspiration to him, points out that, after all, a textbook cannot be anything but a piecemeal work. But after having read this work night after night for the last three months, the reviewer can only express the wish that teachers of other medical disciplines will have lives well spent to their credit if they will produce a similar work, for such efforts are landmarks of our advance.

G. M. B.

CULBRETH: MATERIA MEDICA

A MANUAL OF MATERIA MEDICA AND PHARMACOLOGY. *Comprising the Organic and Inorganic Drugs Recognized by the U.S.P. and National Formulary, Together With Important Allied Species and Useful Synthetics. Especially Designed for Students of Pharmacy and Medicine, As Well as for Druggists, Pharmacists, and Physicians.* By David M. R. Culbreth, Ph.G., M.D. Seventh Edition, Thoroughly Revised. With Four Hundred and Ninety-Seven Illustrations. Philadelphia: Lea & Febiger. 1927. Price \$8.00.

Like most other materia medica textbooks, a new edition of Culbreth's work (the seventh) has been necessitated by the revisions in the last editions of the U. S. Pharmacopoeia and the National Formulary.

This new edition has been entirely reset and recast. The pharmacognostic aspects of materia medica probably receive more attention in this textbook than in others of a similar scope, and the book is profusely illustrated with representations of

the principal medicinal plants. Although the title includes pharmacology, it seems to the reviewer that this has received less attention than it deserves, especially in regard to the botanically derived drugs. The omission of an important new drug like ephedrine, from a book appearing in 1927, is hardly to be explained except as an inexcusable oversight, seeing that there is already a large amount of literature regarding it.

The fact that the work has run into seven editions is a proof that it meets the requirements and approval of both teachers and students of materia medica.

RICHARDSON: ALUM

THE CURRENT SIGNIFICANCE OF THE WORD ALUM. By William D. Richardson, Former Editor, *Industrial and Engineering Chemistry*; etc. With References to the Literature. Chicago: The Commonwealth Press. 1927. Price \$1.00.

This is a monograph the purport of which is evidently to show that the term alum should be confined to its strictly chemical meaning and not loosely applied to substances which in shop jargon are commonly designated under that term. The book will principally interest chemists and industrial workers who use the substances referred to.

BERG: LAWS OF EVOLUTION

NOMOGENESIS OR EVOLUTION DETERMINED BY LAW. By Leo S. Berg, D.Sc. (Moscow), Chief of the Bureau of Applied Ichthyology and Professor of Geography in the State University of Leningrad. With an Introduction by D'Arcy Wentworth Thompson. Translated from the Russian by J. N. Rostovtsov. New York City: Oxford University Press. 1926. Price \$10.00.

We have a tendency to think that the intellectual life of Russia is at a low ebb; but, as a matter of fact, some of the most significant work, in philosophy, art and science is now coming out of that remarkable country. This book is an example.

Professor Berg is a distinguished scientist and a deep and powerful thinker, and he has here set forth the grounds for his conviction that "chance," as we ordinarily consider it, has no place whatever in nature, but that every process and change is strictly governed by laws, many of which we have not yet discovered or understood. The processes of evolution are, therefore, not conceivably the result of fortuitous variations and selections, but arise from the operation of a "principle of regulation," which is inherent in all living organisms, by means of which they adapt themselves to the circumstances in which they are placed.

Berg advances a number of ideas which will be considered rank heresy by many, but he backs up every statement by abundance of references to facts which can be verified by any trained worker who has

sufficient interest to make the attempt. He is controversial but modest, and he says what he means in very direct language. We may agree with him or disagree, but we cannot ignore him, for he has made his position too sound to permit its being lightly thrown aside.

The translation appears to be entirely satisfactory, and the physical features of the book—type, paper and binding—are excellent. There is an adequate index and an extensive bibliography.

This is no book for dabblers or for those who dread concentrated mental effort—it is, in no sense, "light reading." But for men with a true scientific outlook, who desire to come as close as possible to understanding fundamentals, it will prove immensely stimulating and valuable. No scientific library will be complete without it.

ROBINSON: TREATMENT OF DISEASE

THE TREATMENT OF ORDINARY DISEASES. *Notes from the Record Book of an Old Practitioner.* By Beverley Robinson, M.D. (Paris), Emeritus Clinical Professor of Medicine at University and Bellevue Hospital Medical College, New York; etc. New York City: American Medical Publishing Co. 1921. Price \$2.00.

Dr. Robinson's little book is better described by its subtitle than by the main title which rather suggests a textbook, which it is not. It is composed of rather casual notes of treatment from the record book of an old practitioner.

Dr. Robinson thinks it a pity that practitioners of long and varied experience should fail to put on record the expression of such experience in the treatment of disease, and in this book he has given his personal views of treatment of ordinary diseases after a long professional life. It reads like a personal chat with the author and many will find it helpful and pleasant to pick up for half an hour at times.

WILSON: HARDENING OF THE COLON

TONIC HARDENING OF THE COLON. By T. Stacey Wilson, M.D. & B.Sc. (Edin.), F.R.C.P. (Lond.) London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$2.50.

The author considers that what he describes as hardening of the colon, though quite frequent and resulting in much suffering, causes but little impairment of the general health. The condition is due to an imbalance between the static and contractile forces governing the muscular wall of the colon.

The symptoms of colon hardening range from abdominal pain to mental depression; such symptoms can easily be referred to some other region within a very wide range.

Diagnosis depends upon palpation of the colon in the right and left iliac fossae. The "hardening" is due to an excess of the normal resistance which tonic "static fixation"

of the protoplasm of the muscle fibers offers to peristaltic and tonic contraction. Such a hardening, the author says, is quite common and plays a leading part in the causation of various symptoms.

The book contains a large number of illustrative case reports.

In a general sense the book may be described as the setting up of old ideas in a new dress. Nevertheless, there may be a good many obscure cases in which the author's ideas may be of practical benefit and direct the physician to the systematic examination of the colon. In this sense, as the price is low, the book may be recommended to the general practitioner. A simple method of treatment is suggested.

CANADIAN MEDICAL DIRECTORY

CANADIAN MEDICAL DIRECTORY AND PHYSICIAN'S HANDBOOK. *Tenth Edition.* Montreal, Canada, 105-109 Ontario St. East: The Canadian Medical Directory. 1927. Price \$4.00 per issue or \$3.00 a year for a three year subscription.

A directory of the physicians, druggists and dentists of Canada. It contains the medical laws of the various provinces in the Dominion and much other information of a character valuable to physicians and students, including the regulations governing medical education in the university medical schools.

TAYLOR: CRAWFORD W. LONG AND ETHER ANESTHESIA

CRAWFORD W. LONG AND THE DISCOVERY OF ETHER ANESTHESIA. By Frances Long Taylor. With a Foreword by Francis R. Packard, M.D. With Eight Full-Page Plates. New York: Paul B. Hoeber, Inc. 1928. Price \$4.00.

This biography, written by the daughter of Crawford W. Long, is a reprint (with additions) of articles which have appeared in the *Annals of Medical History* for 1925.

Mrs. Taylor has first-hand knowledge of the facts connected with her father's early use of sulphuric ether as an anesthetic agent. Here she gives her own personal narrative and has collected all relevant evidence which appears to incontestably establish Long as the discoverer and first user of ether as a surgical anesthetic agent.

The two outstanding facts which emerge from the mass of statements and contradictions, in the controversy regarding the rival claims of Morton and Long, in regard to the discovery of ether anesthesia, are that Long was the first actually to use it for surgical work, although he did not publish his discovery at the time, and that Morton was the first actually to demonstrate its use before a professional medical meeting.

The reasons why Long failed to establish his claims to priority at the time are fully given in the present book, which is

simply written in a spirit of filial devotion and gives a fine pen picture of the modest hero, the true physician, whose reward was sought in his daily work well done and who must be recognized as one of the great benefactors of humanity.

WENCKEBACH & WINTERBERG: ABNORMAL HEART FUNCTIONING

Die UNREGELMÄSSIGE HERZTÄTIGKEIT. Von K. F. Wenckebach und H. Winterberg. Textband, mit. 63 Abbildungen im Text und einem Register. ... Tafelband, mit 447 Abbildungen auf 184 Tafeln. Leipzig C1, Mittelstrasse 2: Verlag Von Wilhelm Engelmann. 1927. Price: Unbound, 78 Mk.; Bound in Linen, 84 Mk.; Half Leather, 89 Mk.

This book is a recast and extension of that originally published by Wenckebach in 1914, under the title of "Irregularities in the Heart Action and Their Clinical Significance."

In the present book the whole subject of the normal and pathologic physiology of the heart is studied from the clinical point of view, but more especially in the light of electrocardiographic curve readings. Accompanying the text is a separate volume which gives the electrocardiograms in various conditions, there being altogether 447 illustrations, taken chiefly from the author's clinical cases.

The textbook includes a description of electrocardiography and special chapters devoted to sinus rhythm and other rhythmic disturbances, the irritable heart, extra systoles, paroxysmal tachycardia, the various types of atrioventricular disturbances, pulsus alternans and, in fact, all the functional disturbances of the heart are dealt with in an exhaustive manner. There is an excellent bibliography at the end of the book.

This volume, with its accompanying illustrations, should be an excellent compendium for the heart specialist.

BLAVATSKY-HORNE: ALCHEMY

ALCHEMY AND THE SECRET DOCTRINE. By H. P. Blavatsky. Compiled and Edited, with an Appendix, by Alexander Horne, B.Sc., Wheaton, Ill.: The Theosophical Press. 1927. Price \$3.00.

Twenty years ago alchemy was merely a source of laughter and scoffing. Today we have come so near to some of the discoveries sought by the alchemists that their studies begin to interest us. If their language is cryptic, so would that of a lecturer on organic chemistry sound to one who is unfamiliar with the jargon of science. Perchance an effort to understand what those old worthies were getting at might reward the student.

"The Secret Doctrine" and "Isis Unveiled" are monumental works, published fifty years

ago, and their potentialities for interesting an open-minded thinker are suggested by the fact that the former work contained a detailed exposition of the electronic structure of the atom—about forty years before orthodox science discovered it.

In this moderate-sized volume, the editor has gathered together all the things which Madame Blavatzky said about alchemy and the alchemists in those two great libraries of occult lore, and has rearranged them so as to make sequential reading and a clear argument. He has also added footnotes and summaries at the end of each chapter, as well as several appendixes and a bibliography.

Some pages are devoted to the discussion of the Hermetic mysteries, the alkahest, perpetual motion and the elixir of life. Two chapters deal with modern (1875) science and the Secret Doctrine. The science of 1928 comes much closer to the teachings of that surprising work than did the accepted teachings of fifty years ago.

The Aether, that intangible substance which fills all space—the "protyle" of Crookes—is given one interesting chapter as "The Root of the Universe"; while the cosmic elements, fire, air, water and earth (in that order), including, for good measure, the so-far-undiscovered element or force, *akasha*, occupy three chapters. The study of the atom and the evolution of the chemical elements is really fascinating.

Those who have a tendency to sneer at anything out of the ordinary and which they do not fully understand may get some satirical enjoyment, but no meat, out of this book. Real students and thinkers will be loath to lay it down, and will turn to it again and again, for reference, as new ideas come into their minds.

KRAEPELIN: GENERAL PARESIS

GENERAL PARESIS. By Professor Emil Kraepelin, of Munich, No. 14, Nervous and Mental Disease Monograph Series. Authorized English Translation by J. W. Moore, M.D. New York, 64 West 56th St.: The Journal of Nervous and Mental Disease Publishing Company. 1913. Price \$3.00.

This monograph is the authorized English translation of the chapter on general paresis from Kraepelin's "Textbook of Psychiatry".

Kraepelin, after considering all the evidence, declares that syphilitic infection is an essential for the appearance of paresis. Differences in susceptibility to paresis must be sought, not in the different quality of the syphilitic virus, but in differences in people themselves. The excessive use of alcohol is the principal factor, according to Kraepelin, who entirely disagrees with the view that mental and emotional overexertion or a life of culture has anything to do with the appearance of paresis.

The monograph deals with all the medical aspects of the disease considered.

MOSHER: HYGIENE FOR WOMEN

PERSONAL HYGIENE FOR WOMEN. By *Celia Duel Mosher, M.A., M.D., Associate Professor of Personal Hygiene and Medical Adviser of Women, Stanford University, Stanford University, California: Stanford University Press. 1927. Price \$1.50.*

Dr. Mosher thinks that physiologic menstruation should be no handicap to women in the pursuit of their occupations. There need be no anxiety on this score in regard to the physical life of the woman.

The present-day woman is more fully developed and better functioning than her predecessors.

This little book deals with some of the special problems regarding women's health, and has the advantage of being written by a woman physician.

PINCUSSEN: MICROCHEMICAL ANALYSIS

MIKROMETHODIK. *Quantitative Bestimmung der Harn-, Blut- und Organbestandteile in kleinen Mengen für klinische und experimentelle Zwecke.* Von Ludwig Pincussen, Direktor der biochemischen Abteilung des Städt. Krankenhauses am Urban in Berlin. Vierte, vermehrte und verbesserte Auflage. Mit 31 Abbildungen. Leipzig: Georg Thieme. 1928. Price 6 Mk.

The author is the director of the biochemical department in the Municipal Hospital of Berlin. The book will be of value to laboratory clinical workers who have to determine minute quantities of chemicals in the blood, urine, etc. It gives a clear exposition of the methods of chemical analysis employed in such determinations, including nephelometry, colorimetry and gas analysis.

In this fourth edition some newer methods of micro-analysis have been added.

PURVES-STEWART: BRAIN TUMORS

INTRACRANIAL TUMOURS AND SOME ERRORS IN THEIR DIAGNOSIS. By *Sir James Purves-Stewart, K.C.M.G., C.B., M.D. (Edin.), F.R.C.P., Senior Physician to Westminster Hospital, Physician to the Royal National Orthopaedic Hospital, etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$3.75.*

This work is based upon the author's study of 253 patients, all of whom had signs and symptoms pointing to intracranial tumors. In 121 of these patients the anatomic condition was verified, either by operation or autopsy, and the author's conclusions are based on this latter series alone.

The book is a monograph of the author's personal experience only; but a study of this kind, by such a recognized authority as Sir James Purves-Stewart, gives it particular weight and interest to those who are drawn to the investigation of brain tumors; moreover, every practitioner will

find the recital of the case reports and symptoms of great value when judged in the light of the later anatomic diagnosis. Such cases are liable to be seen any day in general practice.

The cases are clearly illustrated and the author comments upon them, acknowledging his failures in diagnosis and stating the reasons why a wrong diagnosis was suggested.

In the 22 chapters which compose the book almost every type of brain tumor will be found, and a study of this material should result in clarifying the diagnoses in a considerable numbers of obscure cases.

MUIR AND RITCHIE: BACTERIOLOGY

MANUAL OF BACTERIOLOGY. By *Robert Muir, M.A., M.D., Sc.D., LL.D., F.R.S., Professor of Pathology, University of Glasgow, and the late James Ritchie, M.A., M.D., F.R.C.P. (Ed.), Late Irvine Professor of Bacteriology, University of Edinburgh.* Revised with the Co-operation of *Carl H. Browning, M.D., D.P.H., Gardiner Professor of Bacteriology, University of Glasgow, and Thomas J. Mackie, M.D., D.P.H., Irvine Professor of Bacteriology, University of Edinburgh.* Eighth Edition Illustrated. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$4.75.

Muir and Ritchie's Bacteriology is intended primarily for students and practitioners of medicine and includes only the bacteria associated with disease in the human subject.

The book includes descriptions of the usual practical laboratory work and of the diseases caused by specific bacteria, protozoa and fungi.

This eighth edition of the book has been thoroughly revised and recent developments in knowledge and technic have been added. As the book stands, it is a precise and concise exposition of present-day knowledge of the pathogenic bacteria, and as such can be recommended as fulfilling its purposes. The illustrations are numerous and clear, but the spacing of the type seems to us too close to be comfortable for reading.

EWING: NEOPLASTIC DISEASES

NEOPLASTIC DISEASES. A Treatise on Tumors. By *James Ewing, A.M., M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City; Pathologist to the Memorial Hospital.* Third Edition, Revised and Enlarged, With 546 Illustrations. Philadelphia and London: W. B. Saunders Company. 1928. Price \$14.00.

Since the first appearance of Professor Ewing's work on tumors, in 1919, it has filled the gap in American literature on neoplasms formerly bridged over by German works on this subject. The book deals

with the origin, structure and developmental history of neoplasms.

In this third edition the author has embodied the information acquired by the Codman Registry of Bone Sarcoma, under the guidance of the American College of Surgeons. The chapters dealing with the varieties of mammary cancer and brain tumors have also been much extended, and many additions and changes have been made.

The book is one that especially interests the pathologist; at the same time the general practitioner—especially he who is familiar with his microscope—will obtain a vast amount of first hand information from this profusely illustrated compendium regarding the nature of any tumor he may meet in his practice. Besides, there is the pleasure and profit of delving into the lore of the by-paths which disordered tissues may pursue, with their curious clinical manifestations, which is always of great interest.

Ewing's Neoplastic Diseases is an essential in any well rounded out medical library.

TYLECOTE AND FLETCHER: DISEASES OF THE LUNGS

DIAGNOSIS AND TREATMENT IN DISEASES OF THE LUNGS. By Frank E. Tylecote, M.D., D.P.H. (Vict.), F.R.C.P. (Lond.), Honorary Physician to the Manchester Royal Infirmary; etc.; and George Fletcher, M.A., M.D. (Glas.), M.R.C.P. (Lond.), D.P.H. (Camb.), Assistant Tuberculosis Officer, Lancashire County Council, etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$2.25.

A handy book which, as the authors say, aims at placing before the senior student or the young practitioner the ordinary methods of diagnosis and treatment of the commoner forms of lung disease in such a manner as to prove helpful to him in practice.

The book contains eleven chapters and apparently fulfils the purpose planned. It is not intended for use by experienced physicians.

ABDERHALDEN: BIOLOGIC METHODS

HANDBUCH DER BIOLOGISCHEN ARBEITSMETHODEN. Geh. Med.-Rat Prof. Dr. Emil Abderhalden, Direktor des Physiologischen Institutes der Universität Halle a.d. Saale. Abt. 1, Chemische Methoden, Teil 2, 1. Hälfte, Heft 2. Allgemeine chemische Methoden. Siegfried Edlbacher-Heidelberg: Diazotieren. Ernst Maschmann-Frankfurt a.M.: Ätzalkalischmelze Nitrieren. Berlin N 24, Friedrichstrasse 105 B: Urban & Schwarzenberg. 1927. Price Mk. 10.

This, the second number of Part 2 (Chemical Methods) of Abderhalden's textbook on biologic investigation procedures, includes a short chapter by Ed-

bacher on diazotization and a more extensive description by Maschmann on fused caustic alkali and nitration methods of chemical reduction.

WERTHEIMER: PERMEABILITY

PERMEABILITÄTSSTUDIEN AN EINER ÜBERLEBENDEN MEMBRAN. Von Priv.-Doz. Dr. Ernst Wertheimer, Halle a.d. Saale. (Neue Folge, Heft 2, Fortschritte Der Naturwissenschaftlichen Forschung. Herausgegeben von Prof. Dr. Emil Abderhalden-Halle A.S.) Berlin N 24, Friedrichstrasse 105 B: Urban & Schwarzenberg. Price Mk. 2.40.

A short monograph of 25 pages concerning the biochemical and biophysical phenomena of permeability of living membranes to chemical solutions of varying tonicity; it should be of interest to laboratory workers who read German.

WHITEHEAD: SYMBOLISM

SYMBOLISM. Its Meaning and Effect. By Alfred North Whitehead, F.R.D., Sc.D. (Cambridge), Hon. D.Sc. (Manchester), Hon. LL.D. (St. Andrews), Hon. D.Sc. (University of Wisconsin), Hon. Sc.D. (Harvard and Yale), Fellow of Trinity College in the University of Cambridge and Professor of Philosophy in Harvard University. Barbour-Page Lectures, University of Virginia, 1927. New York: The Macmillan Company. 1927. Price \$1.50.

There are a good many people who enjoy the study of cryptograms and the deciphering of strange manuscripts. Such persons will rejoice in this little volume.

Symbolism is a profoundly interesting subject, but is, by its very nature, so abstruse that those who would popularize a study of its great potentialities ought to write about it in an exceptionally clear and simple manner.

The author of this book has, apparently, no desire to bring this knowledge to the general public, for he has produced a work whose logic is so complicated and whose language is so involved and technical that it can scarcely be of value except to those whose knowledge of psychology and symbolism is already rather deep and extensive. To such persons alone this book can be recommended.

BUTLER: SLIT-LAMP

AN ILLUSTRATED GUIDE TO THE SLIT-LAMP. By T. Harrison Butler, M.A., D.M. (Oxon.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Late Radcliffe Travelling Fellow of the University of Oxford, etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$9.00.

This volume is based upon series of lectures given by the author from 1924 to 1926; he regards it, not as a textbook, but as an elementary introduction to the technique of slit-lamp work.

The Zeiss slit-lamp alone was used by the author, which he considers embodies the work of Gullstrand, Vogt and others. Vogt especially is regarded by Butler as the father of the new science of slit-lamp investigation of the eye and the author freely quotes him constantly.

The work comprises 16 chapters, and the slit-lamp images of various lesions in the different structures and regions are discussed in order. The two chapters on the normal and pathologic lens and the chapter on the retina, intra-ocular tumors and glaucoma seem to be especially interesting and valuable.

A word should be said in regard to the excellent typography and hand-drawn illustrations, many of which are in color.

The book is essentially one for the specialist, although there appears to be no reason why the general practitioner should not easily familiarize himself with slit-lamp technic.

MEDICAL CLINICS OF NORTH AMERICA

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume II, Number 4, Brooklyn Number, January, 1928. Illustrated. Philadelphia and London: W. B. Saunders Company. Price: Per Clinic year, July, 1927 to May, 1928, Paper, \$12.00; Cloth, \$16.00 net.

The January number of this interesting serial is devoted entirely to Brooklyn clinics. There are 19 articles. Those papers which seem to be of the greatest value to the general practitioner are "Intracranial Hemorrhage of Newborn," by Dr. A. D. Smith; "Gastric Symptoms Occurring in Syphilis," by Dr. I. Gray; "The Tachycardias," by Dr. C. Shookhoff; "Carcinoma of the Esophagus," by Dr. A. F. R. Andresen, and "The Clinical Types of Cardiac Failure," by Dr. F. B. Cross.

CROWE: ARTHRITIS AND RHEUMATISM

BACTERIOLOGY AND SURGERY OF CHRONIC ARTHRITIS AND RHEUMATISM. With End-Results of Treatment. By H. Warren Crowe, D.M., B.Ch. (Oxon.), M.R.C.S., L.R.C.P. The Chapter on Surgical Treatment by Herbert Frankling, C.B.E., M.R.C.S. (Eng.), London, New York, etc.; Humphrey Milford, Oxford University Press. 1927. Price \$9.00.

This is a supplementary volume to the author's book on the "Treatment of Chronic Arthritis and Rheumatism" which was reviewed in CLIN. MED. AND SURG., September, 1927, p. 723.

The author stresses the association of streptococci with chronic arthritis; but rheumatoid arthritis he particularly associates with a rare type of white staphylococcus—the *Micrococcus deformans*—and in the present book he brings forward a number of additional arguments to strengthen his views on this point.

The importance of foci of infection—especially in the teeth—receives due recognition.

The book may be regarded as a fair presentation of the views of those who consider arthritis and so-called rheumatism as entirely bacterial in origin, and should be read in conjunction with the author's previous one. Thus, in the first book, vaccine therapy was recommended: In the present work little is said about the value of vaccine therapy but, in Chapter VII, the author gives an analysis of the results of his use of this method.

The chapter on surgical treatment by Dr. Frankling can scarcely be said to be anything more than a review of the current literature on the subject.

The book is clearly printed, easy to read, and is well illustrated.

LOEW: CALCIUM NEEDS OF THE BODY

DER KALKBEDARF VON MENSCH UND TIER. Zur chemischen Physiologie des Kalks. Von Dr. Oscar Loew, Professor für chemische Pflanzenphysiologie an der Universität München, vormals Expert für chemische Physiologie am landwirtschaftlichen Ministerium in Washington und Professor an der Universität Tokio, Japan. Vierte, verbesserte und ergänzte Auflage. München: Verlag der Arztlichen Rundschau Otto Gmelin. 1927. (Distributed free of charge by the Wulfging Co., 15 East 26th St., New York City.)

The printing of a fourth edition of this monograph by Professor Loew is proof of the widening interest in calcium therapy and of the growing knowledge of the action of lime in the animal organism.

The consequences of lime deficiency in food and the advantages of recalcification are discussed in a most scientific and lucid manner.

From the practical point of view, physicians will appreciate the chapters on lime requirements of mother and child, calcium therapy and the role of calcium in dietetics.

Now that investigators have shown that lime salts are efficacious when given by mouth, there is nothing to prevent the general practitioner from prescribing calcium whenever it is indicated.

From the clinical, as well as the laboratory point of view, Dr. Loew's monograph is a valuable contribution to calcium therapy and metabolism.

Medical News



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PROF. I. S. FALK DIAGNOSING DIPHTHERIA

Prof. I. S. Falk, bacteriologist, University of Chicago, has done some interesting work on the application of electricity to bacteriology.

He is here shown testing a new apparatus by means of which he claims to be able to detect the presence of Klebs-Löffler bacilli by their electric reactions. This method, if proved reliable, should be much quicker and less expensive than diagnosis by means of cultures, as now practiced.

POSTGRADUATE TRAVEL AND CLINICS

The Interstate Postgraduate Medical Association is putting on a big program this year.

On May 16 a party will leave Chicago on a tour of the leading clinics of the South and West and will visit St. Louis, Nashville, New Orleans, Dallas, Los Angeles, San Francisco, Portland, Denver and Omaha, ending at The Mayo Clinic, Rochester, Minn., on June 10, in time to permit the travellers to attend the meeting of the A.M.A.

On June 16, a party for a tour of the leading centers of Europe will sail from New York, to return August 6.

All plans for both of these clinical tours have been fully worked out and they are offered to physicians at a flat rate covering all necessary expenses.

For details of the American or European tour, write to Dr. U. B. Peck, Freeport, Ill., who is supervising the arrangements.

CHANGES IN THE PHARMACOPEIA

We still have on hand a number of copies of the list of all changes in the U.S.P.X. and will be happy to send one, without charge, to any physician or druggist who will write for it.

Every physician should be familiar with the standards set in the Pharmacopoeia. The book is large and rather expensive. A number of changes were made in the recent Tenth Revision. Here is your chance to find out, for nothing, what these changes were.

The line forms at the left. Please do not push or crowd!

OPENING IN NEW MEXICO

We are informed that there is an opening for an active and capable physician in the northwest corner of New Mexico, near the Colorado line. A building planned for a tuberculosis sanatorium is also for sale.

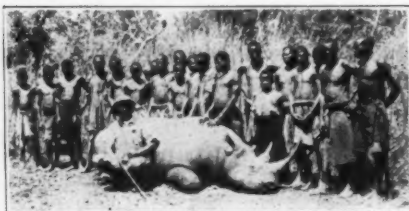
If this sounds interesting, write for more details to Mr. C. L. Brazil, c/o San Juan Realty & Insurance Co., Aztec, New Mexico.

SKIN REJUVENATION

From Germany comes a report that Dr. Joseph Kapp has immunized rabbits with the epithelial juice of guinea-pigs and then obtained from them a serum which, when injected hypodermically, causes a marked increase in the production of new cells in the skin.

If this preparation works out in the hands of other investigators it may have profound effects, not only on medical practice, but on human life in general. It may revolutionize our ideas regarding the healing of wounds; and, if it can cause a new skin to grow, it will put a good many of

the beauty specialists out of business and make grandma hard to distinguish from the flappers—even when seen from in front.



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CHICAGO DOCTOR RETURNS FROM AFRICAN HUNT

Dr. F. P. Thompson has just returned to Chicago after a seven months' hunting trip in Africa. Dr. Thompson hunted in Portuguese East Africa and shot more than 100 head of big game. He reported that the animals were losing their ferocity because of much hunting and that it was a rare case for a wild beast to charge a hunter.

Dr. Thompson is shown with a black rhinoceros which he killed while on his trip.

MEDICAL MOTION PICTURES

The Eastman Kodak Co. announces the first of a projected series of films, prepared in cooperation with the committee on medical motion pictures of the American College of Surgeons. The film consists of three 1000-foot reels of standard size (or three 400-foot reels of amateur size) and is available for rental or sale to authorized individuals or groups. The title is, "Diagnosis and Treatment of Infections of the Hand."

MEDICAL EXAMINATION OF IMMIGRANTS

Much time, loss and disappointment are saved by having persons who wish to come to the United States examined, physically, before they leave home.

Officers of the U. S. Public Health Service are now doing this work in England, Scotland, Ireland, Germany, Sweden, Norway, Poland and Denmark. Last year they turned back 5,580 persons (4.43 percent of those examined).

HEALING CULT IN INDIA

We of the Western world are not alone with our cults of healing—our chiropractors, naprapaths, *et al.* In India they have a system of healing known as *Ayurveda*, whose proponents publish a fair-sized monthly magazine, containing communications on their art, with frequent Sanskrit quotations.

OLDEST MEDICAL BOOK

Professor James H. Breasted, of the University of Chicago, has recently completed the translation and editing of the oldest book of Medical Science in the world—the Edwin Smith Papyrus, an Egyptian Medical treatise of the seventeenth century before Christ. When published the translation will make a book of about 600 pages.

CIVIL SERVICE EXAMINATIONS

Application will be received until June 30, 1928, for appointment as *Occupational Therapy Aide* in arts and crafts, trades and industries, poultry raising and gardening.

Salaries range from \$1,680 to \$2,040 a year.

Competitors will not be required to report for examination at any place, but will be rated on their physical ability, and education, training, and experience.

Physiotherapy Aide

Physiotherapy Pupil Aide

Applications received until February 25, April 21, and June 23, 1928. Salary not stated.

Junior Medical Officer (Interne)

Applications received until June 30, 1928. Salary \$1,260 to \$1,860 with quarters; \$1,860 to \$2,400 without quarters.

Applications will be received until April 28 for appointment as

Trained Nurse

Trained Nurse (Psychiatric)

For service in Panama. Salaries, \$120 to \$155 a month. Married women not eligible; men are especially desired.

Full information may be obtained from the United States Civil Service Commission at Washington, D. C.

Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our

readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

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| D- 1 | Helping the Cell to Help Itself. 32-page booklet by The Alkalol Co. | D- 17 | An Index of Treatment. Burnham Soluble Iodine Co. |
| D- 2 | Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co. | D- 19 | Hyperacid Conditions, Their Relief and Correction, Alka-Zane. Wm. R. Warner & Co. |
| D- 3 | Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm. | C- 20 | A Survey of Focal Infection. Fellows Medical Mfg. Co. |
| D- 4 | Pluto Water. Its Medicinal Values. 16-page booklet. French Lick Springs Hotel Co. | D- 24 | German Resorts. German Health Resorts. |
| D- 5 | Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co. | D- 25 | Program Medical Lectures in Bad Kissingen. German Health Resorts. |
| D- 6 | The Journal of Organotherapy. 95-page booklet published monthly. G. W. Carnrick Company. | D- 26 | NEW SUGGESTIONS: X-Ray Technic with Petrolagar as Suspending Agent for the Opaque Meal, with reprint from the <i>Medical Journal and Record</i> for May 4, 1927, entitled "A Suggested Modification in the Technic of X-Ray Examinations of the Gastrointestinal Tract" by Dr. J. F. Montague, F.A.C.S. Deshell Laboratories, Inc. |
| D- 7 | The Cure of Cystitis, Pyelitis and other Inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co. | D- 28 | T. O. S. Tilden Company. |
| D- 8 | The Dangers of Curettage. Huston Bros. Company. | D- 29 | The Blood Picture. The Wilson Laboratories. |
| D- 9 | Hang This Up—It Tells How to Make Percentage Solutions. Sharp and Dohme. | D- 30 | Dys-Amen-Caps. Tilden Company. |
| D- 10 | Twentieth Century Health Builders. Burdick Corporation. | D- 35 | Assisting Nature to Assist Itself. Reed & Carnrick. |
| D- 12 | The Bloodless Phlebotomist, Vol. VI, No. III. The Denver Chem. Mfg. Co. | D- 37 | pH 7.4, Alka-Zane. Wm. R. Warner & Co., Ltd. |
| D- 13 | Endocrines and Hormones. Huston Brothers. | D- 38 | Hycol. The Certified Disinfectant. Merck & Co. |
| D- 14 | The New Ultra-Violet Therapy. McIntosh Electrical Corporation. | D- 39 | A Convincing Solution of an Old Problem, Isacen. The Hoffmann-La Roche Chemical Works. |
| D- 15 | Atophan—Rheumatism, Gout, Neuritis, Sciatica, Neuralgia. Schering & Glatz, Inc. | D- 40 | Truth Spreads by Testimony, Isacen. The Hoffmann-La Roche Chemical Works. |

- C- 41 The Specific Treatment of Pneumonia with Numoquin Base. Merck & Company.
- D- 42 Detoxification in the Treatment of Infection. The Wm. S. Merrell Company.
- D- 43 "Humanize" Cow's Milk. The Wm. S. Merrell Company.
- D- 45 Vera-Perles of Sandalwood Comp. Paul Plessner Co.
- D- 46 Bedtime Nourishment. Mellin's Food Co.
- D- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Co.
- D- 48 A New and Successful Synthetic Remedy—Cardiazol. E. Bilhuber, Inc.
- D- 49 The Calcreose Detail Man. Maltbie Chemical Co.
- D- 50 Outwitting Constipation. Standard Oil Co.
- D- 51 The Ideal Anti-Gonorrheic. Reidel & Co., Inc.
- D- 52 Cre-So-Mul. First Texas Chemical Mfg. Co.
- D- 56 Regaining Health. How Science Can Guide You! The Fleischmann Co.
- D- 58 The Pharmacology of Cod Liver Oil. Smith, Kline & French Co.
- D- 62 Medical Pocket Quarterly—March, Reed & Carnrick.
- D- 65 Siomine (Methenamine Tetraiodide) $C^1 H^3 N^4 I^4$ 78.5% Iodine. Pitman-Moore Company.
- D- 67 The Electro-Pathology of Local Inflammation. The Dionol Company.
- D- 70 Yeast Therapy. The Fleischmann Company.
- D- 72 Engineering the Plans for the X-Ray Laboratory. Victor X-Ray Corporation.
- D- 76 Iodized Oil in X-Ray Diagnosis. Merck & Co., Inc.
- D- 77 The Coolidge X-Ray Tube. Victor X-Ray Corporation.
- D- 78 Nourishment for Adults and Children in Health or Illness. Mellin's Food Co.
- D- 81 Gall Bladder disease. Battle & Co.
- D- 82 Service-Suggestions, March-April, 1928. Victor X-Ray Corp.
- D- 83 The Quartz Lamp, April 15. Hanovia Chem. & Mfg. Co.
- D- 84 Latent Constipation—A Diagnostic Problem, Agarol. Wm. R. Warner & Co.
- D- 85 Ultraviolet for Health. Hanovia Chem. & Mfg. Co.
- D- 87 Journal of Intravenous Therapy. Loeser Laboratory.
- D- 93 Britesun Therapeutic Booklet. Britesun, Inc.
- D- 94 A Compendium of Glandular Therapy. Colwell Pharmacal Corporation.
- D- 95 Everything for the Sick—Lindsay Laboratories.
- D- 96 The Hormone. Special Ten-Year Anniversary Number. The Harrower Laboratory.
- D- 97 An Introduction to Clinical Perimetry by H. M. Traquair, M.D., F.R.C.S., Ed. The C. V. Mosby Co.
- D- 98 Tested Brewers' Yeast—Harris. The Harris Laboratories, Inc.
- D- 99 Clinical Casetaking by George R. Hermann, M.D., Ph.D. The C. V. Mosby Co.
- D-100 The Best for Digestion. Reed & Carnrick.
- D-101 Light Therapy. Burdick Corporation.
- D-102 Carrageen, A story of the sea. The E. L. Patch Company.
- D-103 The Electron. McIntosh Electrical Corporation.
- D-104 Selective "Sunlight Indoors" Day or Night. The Burdick Corporation.
- D-105 Treatment of Tuberculosis with Artificial Light. Victor X-Ray Corporation.
- D-106 Acidosis as a Complication in Winter Diseases. William R. Warner & Co.
- D-107 Victor All-Metal Bucky Table. Victor X-Ray Corporation.
- D-108 Ulcers and Hypocalcemia. Harrower Laboratory.
- D-109 Diabetes Mellitus. Harrower Laboratory.
- D-110 When Colds Hang on and Coughs are Stubborn. The Hoffmann-La Roche Chemical Works.
- D-111 For the Surgeon, General Practitioner, Ophthalmologist, Laryngologist, Otolgogist, Rhinologist. Reed & Carnrick.
- D-112 Atophan after more than Fifteen Years of ever expanding use, etc. Schering & Glatz.
- D-113 Forcep Deliveries and Versions. Battle & Co.